CITY OF VALDEZ SMALL BOAT HARBOR
NAVIGATION IMPROVEMENTS
USACE- ALASKA DISTRICT

COST ENGINEERING DX - TPCS ATR CERTIFICATION

The Walla Walla Cost Dx representatives have provided an adequate Agency Technical Review (ATR) of the 2011 Budget and Total Project Cost, studying the project scope, report, cost estimates, schedules, escalation, and risk-based contingencies in accordance with ER 1110-2-1150 Engineering and Design for Civil Works Projects and ER 1110-2-1302 Civil Works Cost Engineering.

As of 10 September, 2010, the Walla Walla District, Cost Engineering Directory of Expertise (Dx) for Civil Works, certifies the City of Valdez Small Boat Harbor Navigation Improvements presented by USACE Alaska District. The Cost DX agency technical review (ATR) resulted in the total project cost estimated values of:

Oct 2011 Price Level:	$55,817,000
Fully Funded Amount:	$58,342,000

It is the responsibility of the District to correctly reflect these cost values within the Final Report.

10 SEP 2010
Date

John C Skarbek

John P. Skarbek
Chief, Cost Engineering
Walla Walla District

****** TOTAL PROJECT COST SUMMARY ******
NED PLAN

PROJECT: Valdez Small Boat Harbor
LOCATION: Valdez, AK

DISTRICT: ALASKA PREPARED: 9/10/2010
POC: CHIEF, COST ENGINEERING, xxx

This Estimate reflects the scope and schedule in report; Draft Interim Integrated Feasibility Report and Environmental Assessment – Navigation Improvements, Valdez, Alaska, Appendices

Program Year (Budget EC): 2011
Effective Price Level Date: 1 OCT 10

WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	FULLY FUNDED PROJECT ESTIMATE Spent Thru: 1-Oct-10 ($K)		COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
02	RELOCATIONS	$2,651	$530	20%	$3,181	0.5%	$2,665	$533	$3,198			$2,748	$550	$3,298
10	BREAKWATER & SEAWALLS	$11,745	$2,349	20%	$14,094	0.5%	$11,806	$2,361	$14,168			$12,175	$2,435	$14,609
12	NAVIGATION PORTS & HARBORS	$26,839	$5,368	20%	$32,206	0.5%	$26,980	$5,396	$32,376			$28,294	$5,659	$33,953
16	BANK STABILIZATION	$2,264	$453	20%	$2,716	0.5%	$2,276	$455	$2,731			$2,386	$477	$2,864
	CONSTRUCTION ESTIMATE TOTALS:	$43,498	$8,700		**$52,198**	0.5%	$43,726	$8,745	$52,472			$45,603	$9,121	$54,724
01	LANDS AND DAMAGES	$335	$67	20%	$402	0.5%	$337	$67	$404			$342	$68	$410
30	PLANNING, ENGINEERING & DESIGN	$950	$190	20%	$1,140	2.1%	$970	$194	$1,164			$1,003	$201	$1,204
31	CONSTRUCTION MANAGEMENT	$1,450	$290	20%	$1,740	2.1%	$1,481	$296	$1,777			$1,671	$334	$2,005
	PROJECT COST TOTALS:	$46,233	$9,247	20%	**$55,480**	0.6%	$46,514	$9,303	$55,817			$48,618	$9,724	$58,342

FEDERAL:	35%	**$20,420**
NON-FEDERAL	65%	**$37,922**

_____ CHIEF, COST ENGINEERING, xxx

_____ PROJECT MANAGER, xxx

_____ CHIEF, REAL ESTATE, xxx

_____ CHIEF, PLANNING,xxx

_____ CHIEF, ENGINEERING, xxx

_____ CHIEF, OPERATIONS, xxx

_____ CHIEF, CONSTRUCTION, xxx

_____ CHIEF, CONTRACTING,xxx

_____ CHIEF, PM-PB, xxxx

_____ CHIEF, DPM, xxx

****** TOTAL PROJECT COST SUMMARY ******
NED PLAN

CONTRACT No. 1

****** CONTRACT COST SUMMARY ******
NED PLAN

PROJECT: Valdez Small Boat Harbor
LOCATION: Valdez, AK
DISTRICT: ALASKA PREPARED: 9/10/2010
POC: CHIEF, COST ENGINEERING, xxx
This Estimate reflects the scope and schedule in report; Draft Interim Integrated Feasibility Report and Environmental Assessment – Navigation Improvements, Valdez, Alaska, Appendices

Estimate Prepared: 12-Aug-10
Effective Price Level: 1 OCT 10

Program Year (Budget EC): 2011
Effective Price Level Date: 1 OCT 10

WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	FULLY FUNDED PROJECT ESTIMATE Mid-Point Date	ESC (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J	P	L	M	N	O
	PHASE 1													
02	RELOCATIONS	$ 2,651	$ 530	20%	$3,181	0.5%	$2,665	$533	$3,198	2013Q1	3.1%	$2,748	$550	$3,298
10	BREAKWATER & SEAWALLS	$ 11,745	$ 2,349	20%	$14,094	0.5%	$11,806	$2,361	$14,168	2013Q1	3.1%	$12,175	$2,435	$14,609
12	NAVIGATION PORTS & HARBORS	$ 26,839	$ 5,368	20%	$32,206	0.5%	$26,980	$5,396	$32,376	2014Q1	4.9%	$28,294	$5,659	$33,953
16	BANK STABILIZATION	$ 2,264	$ 453	20%	$2,716	0.5%	$2,276	$455	$2,731	2014Q1	4.9%	$2,386	$477	$2,864
10	BREAKWATER & SEAWALLS	$ 11,745	$ 2,349	20%	$14,094	0.5%	$11,806	$2,361	$14,168	2013Q1	3.1%	$12,175	$2,435	$14,609
12	NAVIGATION PORTS & HARBORS	$ 26,839	$ 5,368	20%	$32,206	0.5%	$26,980	$5,396	$32,376	2014Q1	4.9%	$28,294	$5,659	$33,953
16	BANK STABILIZATION	$ 2,264	$ 453	20%	$2,716	0.5%	$2,276	$455	$2,731	2014Q1	4.9%	$2,386	$477	$2,864
	CONSTRUCTION ESTIMATE TOTALS:	$43,498	$8,700	20%	**$52,198**		$43,726	$8,745	$52,472			$45,603	$9,121	$54,724
01	LANDS AND DAMAGES	$335	$67	20%	$402	0.5%	$337	$67	$404	2012Q1	1.4%	$342	$68	$410
30	PLANNING, ENGINEERING & DESIGN													
	Project Management	$950	$190	20%	$1,140	2.1%	$970	$194	$1,164	2011Q4	3.4%	$1,003	$201	$1,204
31	CONSTRUCTION MANAGEMENT													
	Construction Management	$1,450	$290	20%	$1,740	2.1%	$1,481	$296	$1,777	2013Q4	12.8%	$1,671	$334	$2,005

US Army Corps of Engineers

Alaska District

Navigation Improvements
Valdez, Alaska

CITY OF VALDEZ SMALL BOAT HARBOR
COST ESTIMATE

Cost Engineering Report

August, 2010

TETRA TECH

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TOTAL PROJECT COST SUMMARY
(General Navigation Facilities Plan)

****** TOTAL PROJECT COST SUMMARY ******
GNF PLAN

PROJECT: Valdez Small Boat Harbor
LOCATION: Valdez, AK

DISTRICT: ALASKA PREPARED: 9/9/2010
POC: CHIEF, COST ENGINEERING, xxx

This Estimate reflects the scope and schedule in report; Draft Interim Integrated Feasibility Report and Environmental Assessment – Navigation Improvements, Valdez, Alaska, Appendices

Program Year (Budget EC): 2011
Effective Price Level Date: 1 OCT 10

WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	FULLY FUNDED PROJECT ESTIMATE Spent Thru: 1-Oct-10 ($K)		COST ($K)	CNTG ($K)	FULL ($K)
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*K*	*L*	*M*	*N*	*O*
02	RELOCATIONS		-			-								
10	BREAKWATER & SEAWALLS	14,099	2,820	20%	16,919	0.5%	14,173	2,835	17,008			14,615	2,923	17,538
12	NAVIGATION PORTS & HARBORS	2,389	478	20%	2,867	0.5%	2,402	480	2,882			2,508	502	3,010
16	BANK STABILIZATION	1,153	231	20%	1,384	0.5%	1,159	232	1,391			1,216	243	1,459
	CONSTRUCTION ESTIMATE TOTALS:	17,642	3,528		**21,170**	0.5%	17,734	3,547	21,281			18,340	3,668	22,007
01	LANDS AND DAMAGES		-			-								
30	PLANNING, ENGINEERING & DESIGN	546	109	20%	655		546	109	655			541	108	650
31	CONSTRUCTION MANAGEMENT	702	140	20%	842		702	140	842			742	148	890
	PROJECT COST TOTALS:	18,890	3,778	20%	**22,668**	0.5%	18,982	3,796	22,779			19,623	3,925	23,547

ESTIMATED TOTAL PROJECT COST: **23,547**

CHIEF, COST ENGINEERING, xxx

PROJECT MANAGER, xxx

CHIEF, REAL ESTATE, xxx

CHIEF, PLANNING,xxx

CHIEF, ENGINEERING, xxx

CHIEF, OPERATIONS, xxx

CHIEF, CONSTRUCTION, xxx

CHIEF, CONTRACTING,xxx

CHIEF, PM-PB, xxxx

CHIEF, DPM, xxx

****** TOTAL PROJECT COST SUMMARY ******
GNF PLAN

CONTRACT No. 1

****** CONTRACT COST SUMMARY ******
GNF PLAN

PROJECT: Valdez Small Boat Harbor
LOCATION: Valdez, AK
DISTRICT: ALASKA
PREPARED: 9/9/2010
POC: CHIEF, COST ENGINEERING, xxx
This Estimate reflects the scope and schedule in report; Draft Interim Integrated Feasibility Report and Environmental Assessment – Navigation Improvements, Valdez, Alaska, Appendices

Estimate Prepared: 12-Aug-10
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Program Year (Budget EC): 2011
Effective Price Level Date: 1 OCT 10

WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	FULLY FUNDED PROJECT ESTIMATE Mid-Point Date	ESC (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
	PHASE 1													
02	RELOCATIONS	$ -	$ -	20%	$ -									
10	BREAKWATER & SEAWALLS	$ 14,099	$ 2,820	20%	$ 16,919	0.5%	14173.3	2834.7	17007.9	2013Q1	3.1%	14615.3	2923.1	17538.3
12	NAVIGATION PORTS & HARBORS	$ 2,389	$ 478	20%	$ 2,867	0.5%	2401.8	480.4	2882.1	2013Q4	4.4%	2508.5	501.7	3010.1
16	BANK STABILIZATION	$ 1,153	$ 231	20%	$ 1,384	0.5%	1159.3	231.9	1391.2	2014Q1	4.9%	1215.8	243.2	1459.0
	CONSTRUCTION ESTIMATE TOTALS:	17,642	3,528	20%	**21,170**		17734.4	3546.9	21281.3			18339.6	3667.9	22007.5
01	LANDS AND DAMAGES	$ -	$ -	20%	$ -									
30	PLANNING, ENGINEERING & DESIGN													
	Project Management	546	$ 109	20%	655		546.0	109.2	655.2	2011Q4	-0.9%	541.3	108.3	649.5
31	CONSTRUCTION MANAGEMENT													
	Construction Management	702	$ 140	20%	842		702.0	140.4	842.4	2013Q2	5.7%	741.9	148.4	890.3
	CONTRACT COST TOTALS:	18,890	3,778		**22,668**		18982.4	3796.5	22778.9			19622.7	3924.5	**23547.3**

TOTAL PROJECT COST SUMMARY
(National Economic Development Plan)

****** TOTAL PROJECT COST SUMMARY ******
NED PLAN

PROJECT: Valdez Small Boat Harbor
LOCATION: Valdez, AK

DISTRICT: ALASKA PREPARED: 9/9/2010
POC: CHIEF, COST ENGINEERING, xxx

This Estimate reflects the scope and schedule in report; Draft Interim Integrated Feasibility Report and Environmental Assessment – Navigation Improvements, Valdez, Alaska, Appendices

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WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	FULLY FUNDED PROJECT ESTIMATE Spent Thru: 1-Oct-10 ($K)		COST ($K)	CNTG ($K)	FULL ($K)
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*K*	*L*	*M*	*N*	*O*
02	RELOCATIONS	2,651	530	20%	3,181	0.5%	2,665	533	3,198			2,748	550	3,298
10	BREAKWATER & SEAWALLS	11,745	2,349	20%	14,094	0.5%	11,806	2,361	14,168			12,175	2,435	14,609
12	NAVIGATION PORTS & HARBORS	26,839	5,368	20%	32,206	0.5%	26,980	5,396	32,376			28,294	5,659	33,953
16	BANK STABILIZATION	2,264	453	20%	2,716	0.5%	2,276	455	2,731			2,386	477	2,864
	CONSTRUCTION ESTIMATE TOTALS:	43,498	8,700		**52,198**	0.5%	43,726	8,745	52,472			45,603	9,121	54,724
01	LANDS AND DAMAGES	335	67	20%	402	0.5%	337	67	404			342	68	410
30	PLANNING, ENGINEERING & DESIGN	950	190	20%	1,140		950	190	1,140			942	188	1,130
31	CONSTRUCTION MANAGEMENT	1,450	290	20%	1,740		1,450	290	1,740			1,532	306	1,839
	PROJECT COST TOTALS:	46,233	9,247	20%	**55,480**	0.5%	46,463	9,293	55,756			48,419	9,684	58,103

ESTIMATED TOTAL PROJECT COST: **58,103**

CHIEF, COST ENGINEERING, xxx

PROJECT MANAGER, xxx

CHIEF, REAL ESTATE, xxx

CHIEF, PLANNING,xxx

CHIEF, ENGINEERING, xxx

CHIEF, OPERATIONS, xxx

CHIEF, CONSTRUCTION, xxx

CHIEF, CONTRACTING,xxx

CHIEF, PM-PB, xxxx

CHIEF, DPM, xxx

****** TOTAL PROJECT COST SUMMARY ******
NED PLAN

CONTRACT No. 1

****** CONTRACT COST SUMMARY ******
NED PLAN

PROJECT: Valdez Small Boat Harbor
LOCATION: Valdez, AK
DISTRICT: ALASKA PREPARED: 9/9/2010
POC: CHIEF, COST ENGINEERING, xxx
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WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	FULLY FUNDED PROJECT ESTIMATE Mid-Point Date	ESC (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
	PHASE 1													
02	RELOCATIONS	$ 2,651	$ 530	20%	$ 3,181	0.5%	2664.9	533.0	3197.9	2013Q1	3.1%	2748.1	549.6	3297.7
10	BREAKWATER & SEAWALLS	$ 11,745	$ 2,349	20%	$ 14,094	0.5%	11806.4	2361.3	14167.6	2013Q1	3.1%	12174.5	2434.9	14609.4
12	NAVIGATION PORTS & HARBORS	$ 26,839	$ 5,368	20%	$ 32,206	0.5%	26979.6	5395.9	32375.5	2014Q1	4.9%	28294.2	5658.8	33953.0
16	BANK STABILIZATION	$ 2,264	$ 453	20%	$ 2,716	0.5%	2275.5	455.1	2730.7	2014Q1	4.9%	2386.4	477.3	2863.7
	CONSTRUCTION ESTIMATE TOTALS:	43,498	8,700	20%	**52,198**		43726.5	8745.3	52471.7			45603.2	9120.6	54723.8
01	LANDS AND DAMAGES	$ 335	$ 67	20%	$ 402	0.5%	336.8	67.4	404.1	2012Q1	1.4%	341.6	68.3	409.9
30	PLANNING, ENGINEERING & DESIGN													
	Project Management	950	$ 190	20%	1,140		950.0	190.0	1140.0	2011Q4	-0.9%	941.8	188.4	1130.1
31	CONSTRUCTION MANAGEMENT													
	Construction Management	1,450	$ 290	20%	1,740		1450.0	290.0	1740.0	2013Q4	5.7%	1532.4	306.5	1838.9
	CONTRACT COST TOTALS:	46,233	9,247		**55,480**		46463.2	9292.6	55755.9			48419.0	9683.8	**58102.7**

Valdez Small Boat Harbor

Cost Narrative

1. Project Description:

The purpose of this project is to evaluate the feasibility of constructing the largest possible harbor for the port at Valdez. The design is based on rubble-mound breakwaters near the shore and rubble-mound breakwaters on the South and East with an Entrance Channel of 40m Width.

The project site is located partially on the existing tidal flats on the east side of the SERVS Dock and south of Hotel Hill, a large rock outcrop. It is constrained physically on three sides. The bathymetry drops off steeply into Port Valdez to the south, Hotel Hill is to the north, and the SERVS Dock is to the west.

Three breakwaters would be constructed to protect the harbor. The main south breakwater would be 473 meters long and protect the south side of the harbor. The eastern most 70 meters would angle to the northeast and form the west side of the entrance channel. The east breakwater would be 240 meters long and curve an arc from the northeast to northwest to form the eastern side of the entrance and harbor. The east breakwater would stop short of Hotel Hill forming the eastern breach. A small stub breakwater 29 meters long would protect the breach at the western end of the south breakwater.

Two separate cost estimates have been prepared for this project. The first estimate includes the Federal and Authorized Non-Federal project costs. This first estimate consists of the General Navigation Facilities (GNF) construction features. The second estimate includes the Federally Authorized GNF construction features as well as additional Local Services Facilities (LSF), which are to be funded solely by the local sponsors. This second estimate is considered the National Economic Development (NED) plan.

The cost sharing of the project would be based on the following:

General Navigation Facilities	80%/20%
Beneficial Disposal	65%/35%
Local Service Facilities	100% local

A more detailed description and cost break down of the federal and non-federal costs can be found within the Main Report in Table 6-7 Cost Allocation.

Basis of Estimate: The estimate is based on the Layout presented in a report titled “Draft Interim Integrated Feasibility Report and Environmental Assessment – Navigation Improvements, Valdez, Alaska, Appendices” dated November 2007. The layout and typical sections are shown on Figs A-22 and A-23 titled “East Site Rubble-Mound 320-Boat Plan” (see Appendix A)

2. Design and Construction Schedule:

Initiate Plans and Specs	January 2011
Sign PCA	September 2011
Sponsor Certify Lands	November 2011
Advertise	February 2012
Initiate Construction	June 2012
Complete Construction	November 2014

It is estimated that overall construction of the NED Plan will take approximately twenty nine (29) months to complete (the estimated schedule if only the GNF were to be constructed is 18 months). The tentative project schedules are presented in Appendix B. The estimated construction times are based on the following:

a. Typical construction crew (1 shift) working 10 hr/day and 6 day weeks.

b. Dredging construction crew (2 shifts) working 10 hr/shift/day and 6 day weeks.

c. Breakwater construction crew (1 shift) working 10hr/day and 6 day weeks.

d. Minimal disturbance to the nesting kittiwakes and their fledglings – starting construction activities after August 21st.

e. No impacts to fish migration or fry out-migration as the breakwater construction would be completed by February and dredging could continue through the fish windows of April 15th - May 15th and June 20th - July 20th by using silt curtains inside the windows.

f. An overall Production Efficiency Rate of 70% which is based on anticipated project difficulty, method of construction, labor availability, supervision, job conditions, weather and expected delays.

3. Quantities

The estimate is based on the Quantities in a report titled "Draft Interim Integrated Feasibility Report and Environmental Assessment – Navigation Improvements, Valdez, Alaska, Appendices" dated November 2007. For some items detailed quantities were broken out further to aid in the cost estimate. The project quantities and detailed quantities and cost estimates are presented in Appendix C.

The quantity estimates used in the cost estimate include waste/loss/swell factors for the project materials as listed below:

Dredge Material Haul	20%
Armor Rock	10%
Secondary Rock	15%
Core Rock	20%

4. Acquisition Plan

The estimates are based on a single contract being awarded to the Prime Dredging Contractor with subcontractors for hydro-surveying, utility relocations and inner harbor float construction. The prime contractor would be responsible for the rubble-mound breakwaters, dredging, bank stabilization, fast land creation and all associated site work as well as oversee the subcontractors' work on hydro-surveying, utility relocations and inner harbor float construction.

5. Project Construction

a. Mob, Demob & Preparatory Work

It is assumed that the Prime Contractor would be from the Seattle area. The Contractor would mob/demob the barge equipment and highly skilled staff from the Seattle area and the floating crane from Anchorage. Other construction equipment and skilled labor are assumed to be available in the Valdez area.

Travel - The Contractor would mob/demob 10 highly skilled staff from the Seattle area. It is assumed that each person would fly back to Seattle 4 times per year over the project duration.

Lodging - The Contractor would mob/demob 10 highly skilled staff from the Seattle area. It is assumed that lodging per diem in Valdez would be for 2 supervisory staff and 8 crew staff.

Temporary Facilities - The Contractor would provide 2 temporary trailers (2.4m x 11m) during the construction period, one for use by contractor personnel and one for use by government personnel.

b. Surveys

Harbor Area Hydro Surveys - The total small boat harbor improvement area is approximately 6.56 hectares (16.2 acres). The improvement area would be surveyed once prior to construction and then again after all improvements have been completed.

Disposal Site Surveys - The mitigation disposal site area at Two Moon Bay is approximately 8.3 hectares (20.0 acres). The disposal area would be surveyed once prior to dumping the dredge material and then again at completion.

c. Breakwaters

Three breakwaters would be constructed to protect the harbor. The south main breakwater would be approximately 473 m long. The east main breakwater would be approximately 240 m long. And just to the west of the south main breakwater would be a 29 m long stub breakwater. The rubble mound could be constructed with land based equipment or a combination of land and marine based equipment.

Materials - The Core Rock, Secondary Rock and Armor Rock materials are assumed to come from Harris Sand and Gravel quarry located 12 km from the project site.

South Main Breakwater - The south main breakwater would be approximately 473 m long and include approximately 25,750 m^3 of Core Rock, 10,160 m^3 of Secondary Rock, and 18,370 m^3 of Armor Rock. The rock would be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.

East Main Breakwater - The east main breakwater would be approximately 240 m long and include approximately 11,590 m^3 of Core Rock, 6,980 m^3 of Secondary Rock, and 12,180 m^3 of Armor Rock. The rock would be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.

Stub Breakwater - The stub breakwater would be approximately 29 m long and include approximately 230 m^3 of Core Rock, 520 m^3 of Secondary Rock, and 650 m^3 of Armor Rock. The rock would be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.

d. Fiber Optic Cable Relocation

A new Fiber Optic Cable line would be constructed from the existing manhole along the perimeter of the harbor project placing two 4-inch conduits to the point where the cable would enter the water along the perimeter of the new harbor breakwater.

Then a splicing crew and barge would pull the cable into conduit and lay to the intercept point of the existing cable south of the South Main Breakwater. The crew would locate the existing cable and unbury and remove armor protectors to allow recovery, cut the cable, recover the end and conduct the splice with the new cable set into the conduit to manhole, lay down the splice, place armor protectors on from end of conduit to safe distance from harbor construction site and finally jet bury the cable to protect from construction activities.

e. Harbor Dredging

The harbor basin would be approximately 435 m by 130 m and dredged to MLLW depths varying from -5.5 m at the entrance to -4 m in the center and to -2.7 m at the west end as the length and draft of the vessels dictate.

A total of approximately 186,410 m^3 of dredging would be required for the entrance and maneuvering channels and the mooring basin. The dredged material would be used to create fast land with the remainder disposed of in an approved deep-water mitigation disposal area at Two Moon Bay, Alaska, which is approximately 48 km from the project site (96 km round trip).

Dredging - Quantity: Includes + 3% for over dredging; Productivity is based on data given by Manson Construction (206-762-0850) for dredging at a production rate of 5400cy/24hr which is equivalent to 172 m^3/hr.

Disposal – The disposal plan consists of two parts. The first part is to create fast land as needed for the new harbor's support facilities, which would utilize approximately 72,280 m^3 of dredged material. The second part of the disposal plan utilizes the estimated remaining 119,720 m^3 for a beneficial use site at Two Moon Bay.

Three (3) disposal plan alternatives were analyzed. These three alternatives looked at partial disposal of dredge materials at Two Moon Bay as a beneficial use instead of mitigation. All alternatives utilized dredge material to cover timber debris at Two Moon Bay and to create fast land at the harbor. Alternative 1 which includes creating fast land with 72,280 m^3 and hauling the remainder of 119,720 m^3 to Two Moon Bay was selected to be carried forward in this cost estimate.

For the selected alternative - Quantity: Includes + 20% swell factor; Assume 2 dump scows would be taken to disposal site by 2000 HP tug would take about 15 hours. A third dump scow would remain at harbor to continue dredging operations.

f. Bank Stabilization

After the north end of the basin is dredged the area between the basin and Hotel Hill would be filled in and compacted constructing fast land. The fast land would utilize 72,280 m^3 of dredge material to build the entire upland prism. The grading and compacting of this material would also include delineating a 120 m long access road.

Basin Slope Protection (1V:2H) would be placed inside the along the basin side of the fast land, mooring basin and along the entrance and maneuvering channels, including all non-breakwater slopes.

Materials for the Slope Protection Rock are assumed to come from Harris Sand and Gravel quarry located 12 km from the project site.

g. Inner Harbor Floats and Facilities

As part of the LSF, the Inner Harbor Floats and Facilities quantities for this project have been calculated based on drawing measurements for 320 vessels and scaled up quantity data from the City of Valdez Small Boat Harbor D and E Float Replacement designed by TNH Inc., Sept. 2006. See Appendix C for detailed quantity calculations for the inner harbor floats and facilities.

6. Cost Estimate

Two cost estimates have been prepared for this project. The first estimate is for the Total Project Cost of the GNF and the second estimate is for the Total Project Cost of the GNF plus the LSF which is considered the NED Plan. The cost estimate documents for this project

include MCACES Construction Cost Estimates and excel spreadsheets of the Total Project Cost Summaries.

a. MCACES Construction Cost Estimate

The construction cost estimates were developed using MCACES 2nd Generation estimating software in accordance with guidance contained in ER 1110-2-1302, Civil Works Cost Engineering. The construction cost estimates were prepared using MII version 4.0, the 2006 Metric Unit Cost Library, 2009 Seattle Labor Library and the 2007 Equipment Library (Region IX) for the base estimate.

The labor rates from the MCACES 2009 National Labor Library were compared with current Davis-Bacon Wage rates from General Decision AK20100001, dated 4/16/2010 (see Appendix E). The higher of the two rates and/or fringes was used in the estimate for each labor category.

The base estimate has been updated with the following fuel prices: $3.74/gal for off-road diesel, $4.08/gal for on-road diesel and $3.96/gal for gasoline for the Valdez area. The base estimate has been updated with current quoted material prices, production rates and specialty equipment costs (barges and tugs). Equipment costs for the dredge barge and tugs were increased by a factor of 2 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.

Labor and Equipment Productivity: The overtime hours listed, in Section 2. Construction Schedule above, have been implemented in the MCACES estimate to account for additional labor and equipment adjustments. The estimate includes an overall Production Index of 70% which is based on anticipated project difficulty, method of construction, labor availability, supervision, job conditions, weather and expected delays. See Appendix D for the Production Index calculation and notes.

b. Project Markups

Escalation: Escalation has been calculated within the total project cost summaries. Price levels have been escalated from price levels of the construction cost estimate for 3Q10 to the midpoint of construction for each WBS Feature Code. The appropriate escalation cost factors for Relocation, Breakwaters, Navigation Ports & Harbors, and Bank Stabilization were taken from EM 1110-2-1304 Civil Works Construction Cost Index System (tables revised 31 March, 2010). The appropriate escalation cost factors for Planning Engineering and Design, and Construction Management were taken from Table 1, for Class 1 in EC 11-2-1999 Corps of Engineers Civil Works Direct Program - Program Development Guidance (Fiscal Year 2012).

Contingency: Contingencies represent allowances to cover unknowns, uncertainties and/or unanticipated conditions that are not possible to adequately evaluate from the data on hand at the time the cost estimate is prepared but must be represented by a sufficient cost to cover the identified risks.

Several areas of cost and schedule risk have been identified for this project and are shown in the table below. The potential increase for these risk items has been estimated based on assumed changes in funding costs, quantities, material prices and schedule delays. The overall effect on the total project cost was then calculated for each of the items based on their potential for increase. The overall effect on the total project cost calculated from all of the items results in a project contingency of approximately 20%.

No.	Item	Description	Potential Increase for Item	Overall Effect on Total Project Cost
1	PED Funding	The amount of money designated for PED could change.	50%	1.04%
2	CM Funding	The amount of money designated for CM could change.	25%	1.56%
3	Contract Modifications	There may be modification issues that have not been captured in current risks.	-	2.00%
4	Dredging Quantity	Concern that underwater surveys and conditions are not adequately known, impacting quantity calculations for dredge quantity.	10%	1.00%
5	Rock Quantity	Concern that underwater surveys and conditions are not adequately known, impacting quantity calculations for contract payment.	10%	2.08%
6	Rock Prices	The price of the 3 types of rock could fluctuate.	15%	1.70%
7	Fuel Prices	The price of fuel could change dramatically.	10%	2.00%
8	Float Prices	The material price for the harbor floats could change.	10%	1.56%
9	Productivity	An overall productivity index of 70% is currently being used.	5%	3.55%
10	Wildlife	The presence of certain species in the construction area could impact costs/schedule.	1.5 months	0.45%
11	Project Schedule	Concern whether current schedule is realistic, or optimistic.	10 months	2.99%
			TOTAL	**19.93%**

Several areas within the cost estimate are either low risk or already have conservative values including; project funding, construction management funds, production rates for dredging, hauling and rock placement, factored specialty equipment costs and the overall productivity index. Therefore a contingency of 20% is deemed appropriate for use in the Total Project Cost Summaries for this project.

c. Functional Costs

Functional costs associated with this work were provided by the Project Manager, as follows:

1) 01 Account - Lands and Damages: This account covers the cost for Lands and Damages for construction. The cost for this account was provided by Linda Arrington, of the Alaska District. A Real Estate Draft Report was prepared by the District in March 2007. The Federal portion due to administration was $32,000. The Non-Federal Projects Portion was $42,000 due to administration and $147,500 due to payments for Real Estate. The Total Real Estate Costs was $221,500 in August 1997 dollars (without contingency). This amount has been escalated from 4Q97 to 3Q10 using the CWCCIS tables (composite) from 31 Mar. 2010, which gives a Total Real Estate Cost of $334,800 to be used in the estimate.

2) 30 Account - Planning, Engineering and Design: This account covers Project Management, Planning and Environmental Compliance, Engineering and Design, Engineering Technical Review & VE, Contracting & Reprographics. Costs of $546,000 for the GNF estimate and

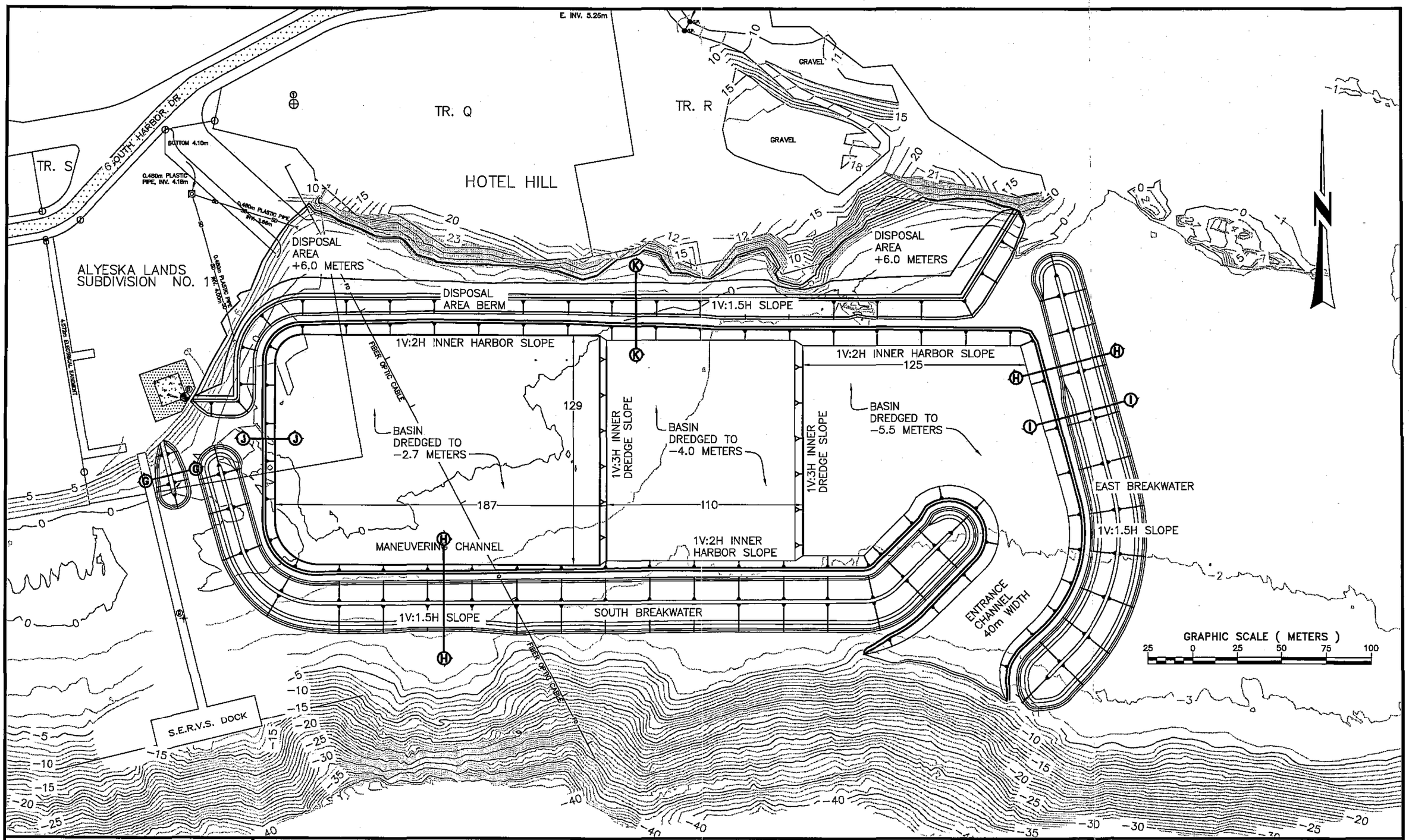
$950,000 for the NED estimate were provided by Alaska District Project Management for this account.

3) 31 Account - Construction Management: This account covers Construction Management, Project Management, and Engineering During Construction. Costs for this account were approximated to be $50,000 per month from time of award till end of construction. Costs for this account were estimated by Alaska District Construction Management staff and provided by Project Management.

d. Total Project Cost Summary

The total project cost summaries include the construction costs from the MCACES estimates, the project mark-ups as well as costs for Lands and Damages, Planning, Engineering & Design, and Construction Management.

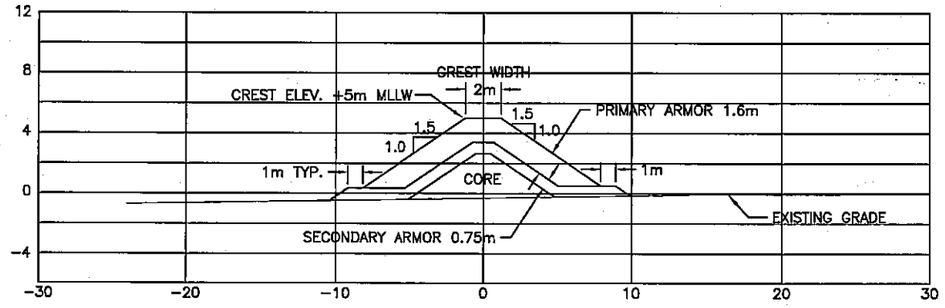
APPENDIX A
East Site Rubble-Mound 320-Boat Plan
Plan View and Cross Sections



ALASKA DISTRICT
CORPS OF ENGINEERS
CIVIL WORKS BRANCH

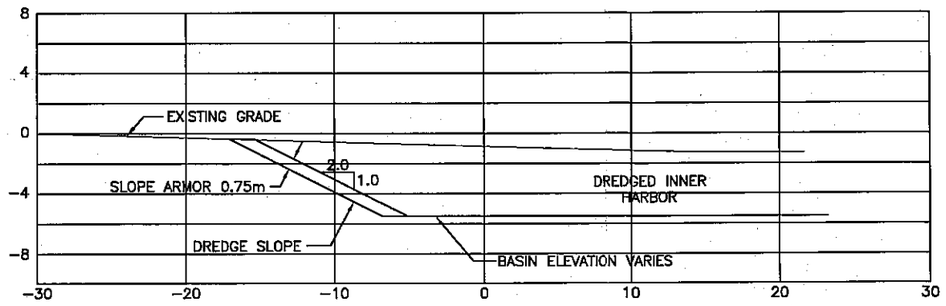
EAST SITE RUBBLE–MOUND 320–BOAT PLAN
PLAN VIEW
NAVIGATION IMPROVEMENTS, VALDEZ, ALASKA

A–22



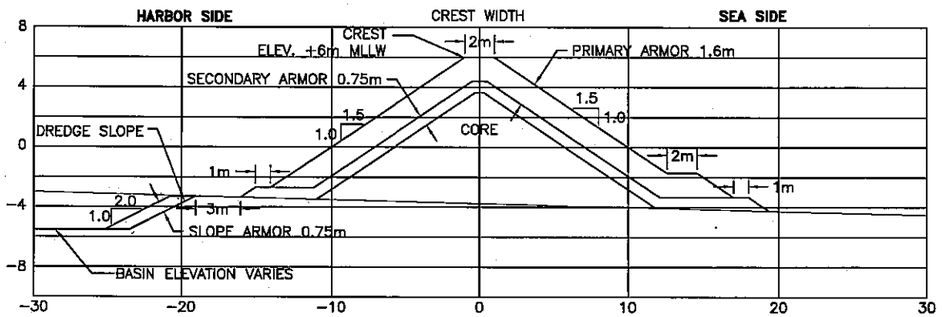
SECTION G

STUB BREAKWATER SECTION



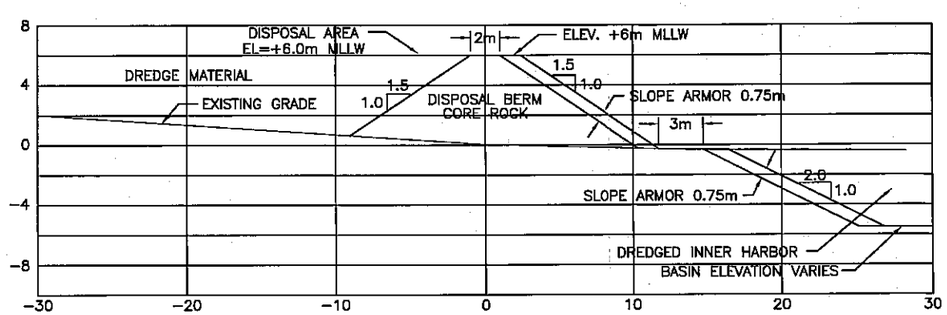
SECTION J

BASIN SLOPE PROTECTION



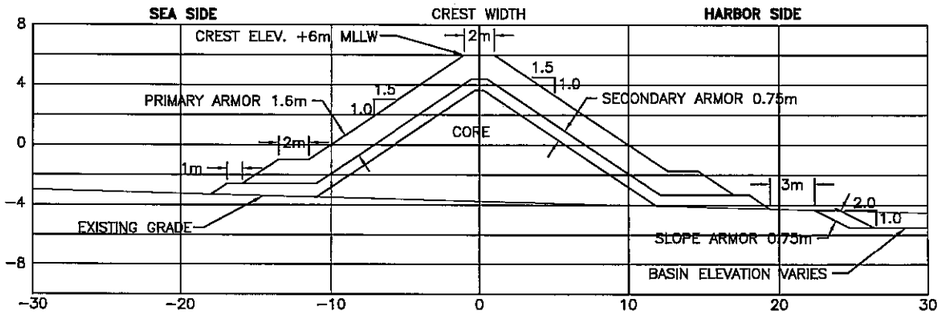
SECTION H

SOUTH AND EAST BREAKWATER TRUNK SECTION



SECTION K

DISPOSAL AREA SECTION



SECTION I

SOUTH AND EAST BREAKWATER HEAD SECTION

ALASKA DISTRICT
CORPS OF ENGINEERS
CIVIL WORKS BRANCH

EAST SITE RUBBLE-MOUND 320-BOAT PLAN
CROSS SECTIONS
NAVIGATION IMPROVEMENTS, VALDEZ, ALASKA

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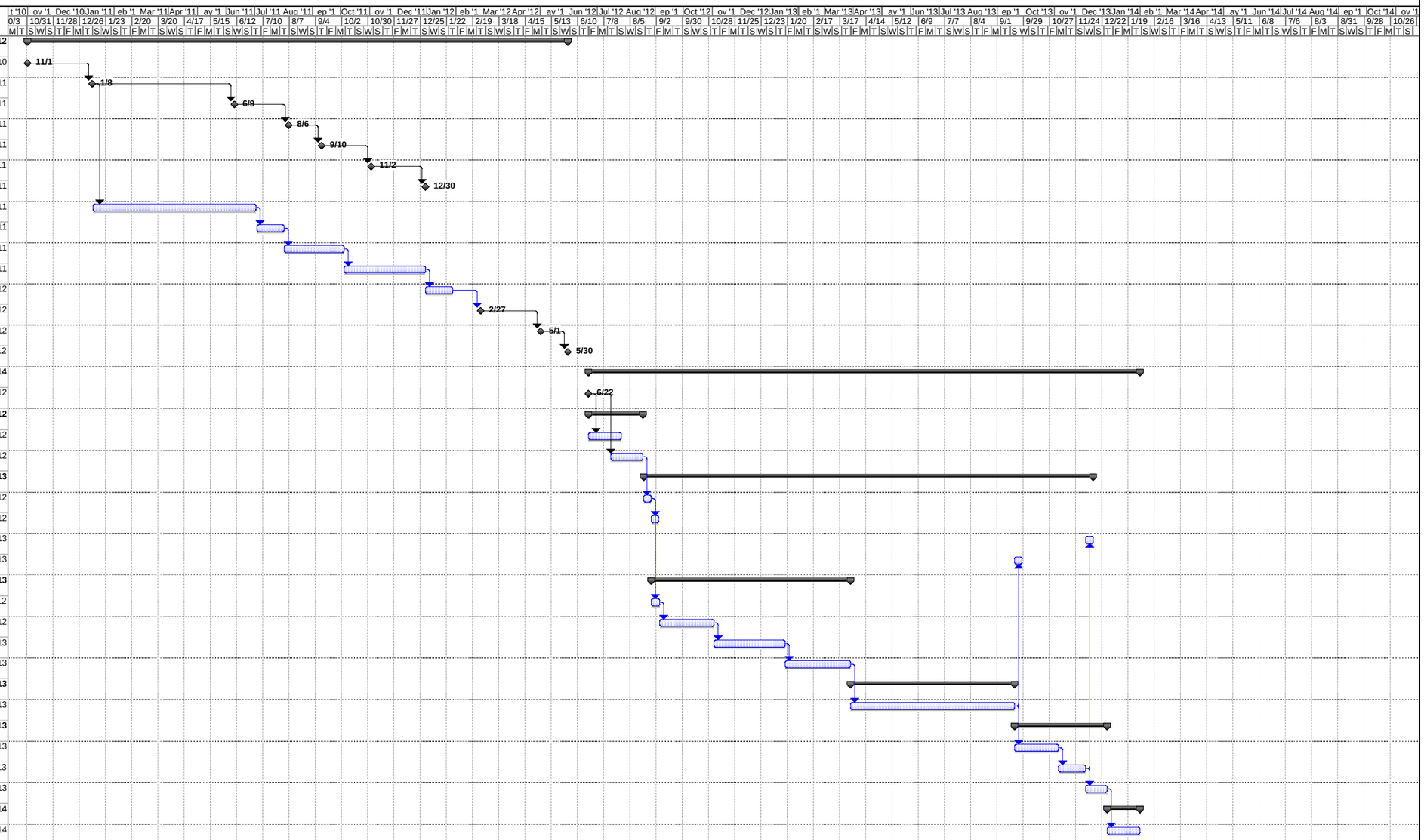
APPENDIX B
Tentative Project Schedule

Thu 8/12/10

Valdez Small Boat Harbor
Tentative Project Schedule
GNF PLAN

ID	Task Name	Duration	Start	Finish
1	**Pre Construction Award**	**490 days**	**Mon 11/1/10**	**Wed 5/30/12**
2	PED Agreement Executed	0 days	Mon 11/1/10	Mon 11/1/10
3	Chief's Report	0 days	Sat 1/8/11	Sat 1/8/11
4	PCA to HQUSACE	0 days	Thu 6/9/11	Thu 6/9/11
5	PCA Approved	0 days	Sat 8/6/11	Sat 8/6/11
6	PCA Executed	0 days	Sat 9/10/11	Sat 9/10/11
7	Real Estate Certified	0 days	Wed 11/2/11	Wed 11/2/11
8	Environmental Compliance Complete	0 days	Fri 12/30/11	Fri 12/30/11
9	35% Design Complete	150 days	Mon 1/10/11	Sat 7/2/11
10	VE Complete	25 days	Mon 7/4/11	Mon 8/1/11
11	65% Design Complete	55 days	Tue 8/2/11	Tue 10/4/11
12	Design Complete	75 days	Wed 10/5/11	Fri 12/30/11
13	BCOE Complete	25 days	Sat 12/31/11	Sat 1/28/12
14	Ready to Advertise	0 days	Mon 2/27/12	Mon 2/27/12
15	Bid Opening	0 days	Tue 5/1/12	Tue 5/1/12
16	Award	0 days	Wed 5/30/12	Wed 5/30/12
17	**Post Construction Award**	**505 days**	**Fri 6/22/12**	**Fri 1/31/14**
18	**Notice-to-Proceed**	0 days	Fri 6/22/12	Fri 6/22/12
19	**Mobilization**	**50 days**	**Fri 6/22/12**	**Sat 8/18/12**
20	Equipment/Personnel Transport	30 days	Fri 6/22/12	Thu 7/26/12
21	Set up Constuction Facilities	30 days	Mon 7/16/12	Sat 8/18/12
22	**Hydro Surveys**	**412 days**	**Mon 8/20/12**	**Thu 12/12/13**
23	Pre Breakwater/Dredging	7 days	Mon 8/20/12	Mon 8/27/12
24	Pre Two Moon Bay	7 days	Tue 8/28/12	Tue 9/4/12
25	Final Breakwater/Dredge	7 days	Thu 12/5/13	Thu 12/12/13
26	Final Two Moon Bay	7 days	Fri 9/20/13	Fri 9/27/13
27	**Breakwater Construction**	**183 days**	**Tue 8/28/12**	**Thu 3/28/13**
28	Stub Breakwater	8 days	Tue 8/28/12	Wed 9/5/12
29	West Portion of South Breakwater	50 days	Thu 9/6/12	Fri 11/2/12
30	East Breakwater	65 days	Sat 11/3/12	Thu 1/17/13
31	East Portion of South Breakwater	60 days	Fri 1/18/13	Thu 3/28/13
32	**Harbor Dredging**	**150 days**	**Fri 3/29/13**	**Thu 9/19/13**
33	Dredging	150 days	Fri 3/29/13	Thu 9/19/13
34	**Bank Stabilization**	**85 days**	**Fri 9/20/13**	**Fri 12/27/13**
35	Disposal Berm	40 days	Fri 9/20/13	Tue 11/5/13
36	Basin Slopes	25 days	Wed 11/6/13	Wed 12/4/13
37	Fast Land	20 days	Thu 12/5/13	Fri 12/27/13
38	**Demobilization**	**30 days**	**Sat 12/28/13**	**Fri 1/31/14**
39	Equipment/Personnel Transport	30 days	Sat 12/28/13	Fri 1/31/14



Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External MileTask | Split

Thu 8/12/10

Valdez Small Boat Harbor
Tentative Project Schedule
NED PLAN

ID	Task Name	Duration	Start	Finish
1	**Pre Construction Award**	**490 days**	**Mon 11/1/10**	**Wed 5/30/12**
2	PED Agreement Executed	0 days	Mon 11/1/10	Mon 11/1/10
3	Chief's Report	0 days	Sat 1/8/11	Sat 1/8/11
4	PCA to HQUSACE	0 days	Thu 6/9/11	Thu 6/9/11
5	PCA Approved	0 days	Sat 8/6/11	Sat 8/6/11
6	PCA Executed	0 days	Sat 9/10/11	Sat 9/10/11
7	Real Estate Certified	0 days	Wed 11/2/11	Wed 11/2/11
8	Environmental Compliance Complete	0 days	Fri 12/30/11	Fri 12/30/11
9	35% Design Complete	150 days	Mon 1/10/11	Sat 7/2/11
10	VE Complete	25 days	Mon 7/4/11	Mon 8/1/11
11	65% Design Complete	55 days	Tue 8/2/11	Tue 10/4/11
12	Design Complete	75 days	Wed 10/5/11	Fri 12/30/11
13	BCOE Complete	25 days	Sat 12/31/11	Sat 1/28/12
14	Ready to Advertise	0 days	Mon 2/27/12	Mon 2/27/12
15	Bid Opening	0 days	Tue 5/1/12	Tue 5/1/12
16	Award	0 days	Wed 5/30/12	Wed 5/30/12
17	**Post Construction Award**	**735 days**	**Fri 6/22/12**	**Mon 10/27/14**
18	**Notice-to-Proceed**	0 days	Fri 6/22/12	Fri 6/22/12
19	**Mobilization**	**50 days**	**Fri 6/22/12**	**Sat 8/18/12**
20	Equipment/Personnel Transport	30 days	Fri 6/22/12	Thu 7/26/12
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23	Pre Breakwater/Dredging	7 days	Mon 8/20/12	Mon 8/27/12
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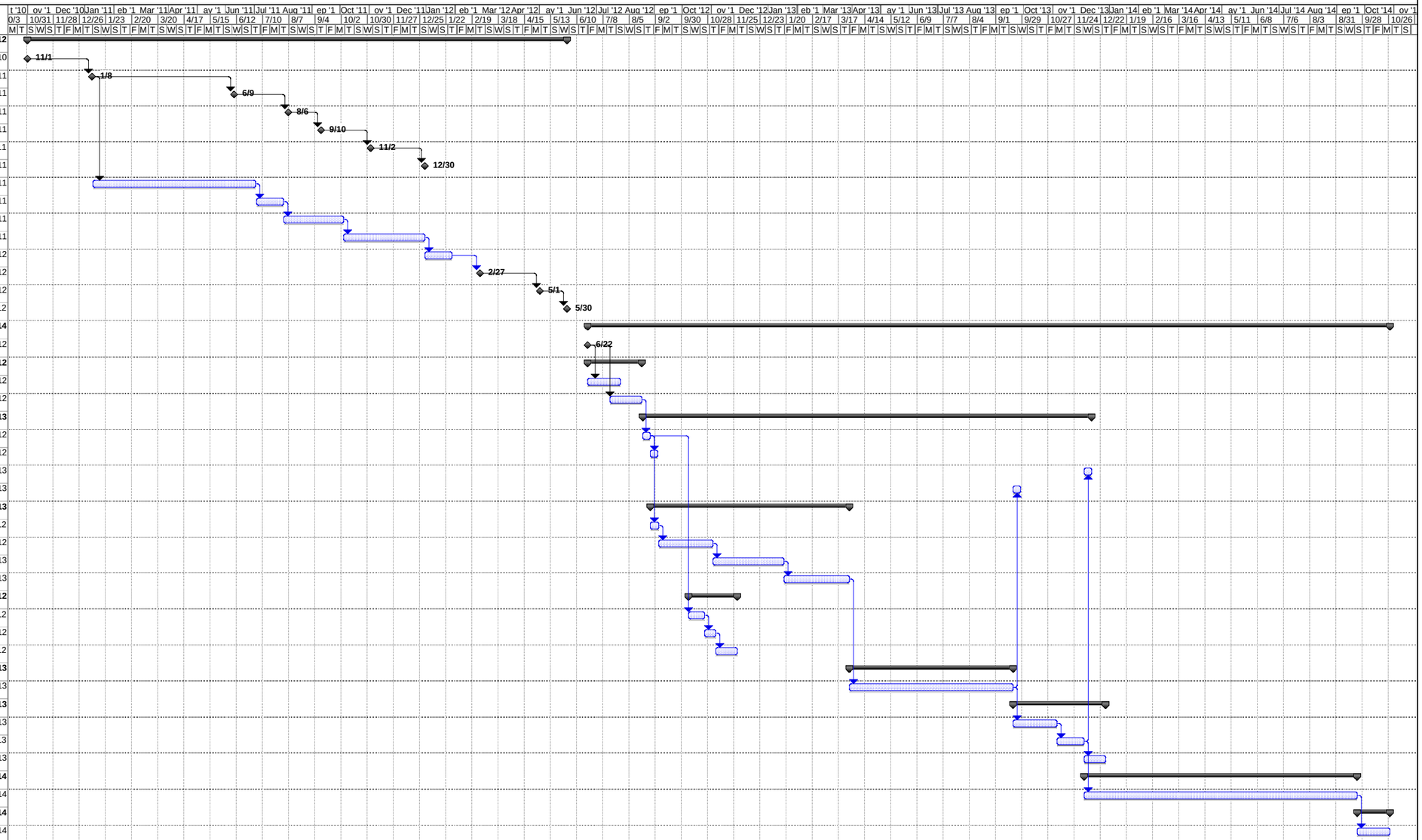
29	West Portion of South Breakwater	50 days	Thu 9/6/12	Fri 11/2/12
30	East Breakwater	65 days	Sat 11/3/12	Thu 1/17/13
31	East Portion of South Breakwater	60 days	Fri 1/18/13	Thu 3/28/13
32	**Fiber Optic Line Relocation**	**45 days**	**Mon 10/8/12**	**Wed 11/28/12**
33	Land Portion Crew	15 days	Mon 10/8/12	Wed 10/24/12
34	Splicing and Crew Transition	10 days	Thu 10/25/12	Mon 11/5/12
35	Ocean Portion Crew	20 days	Tue 11/6/12	Wed 11/28/12
36	**Harbor Dredging**	**150 days**	**Fri 3/29/13**	**Thu 9/19/13**
37	Dredging	150 days	Fri 3/29/13	Thu 9/19/13
38	**Bank Stabilization**	**85 days**	**Fri 9/20/13**	**Fri 12/27/13**
39	Disposal Berm	40 days	Fri 9/20/13	Tue 11/5/13
40	Basin Slopes	25 days	Wed 11/6/13	Wed 12/4/13
41	Fast Land	20 days	Thu 12/5/13	Fri 12/27/13
42	**Inner Harbor Floats**	**250 days**	**Thu 12/5/13**	**Mon 9/22/14**
43	Inner Harbor Floats	250 days	Thu 12/5/13	Mon 9/22/14
44	**Demobilization**	**30 days**	**Tue 9/23/14**	**Mon 10/27/14**
45	Equipment/Personnel Transport	30 days	Tue 9/23/14	Mon 10/27/14



Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External MileTask | Split

APPENDIX C
Quantity Take-offs and Cost Estimates

East Site Rubble-Mound 320-Boat Plan Detailed Quantity Estimate

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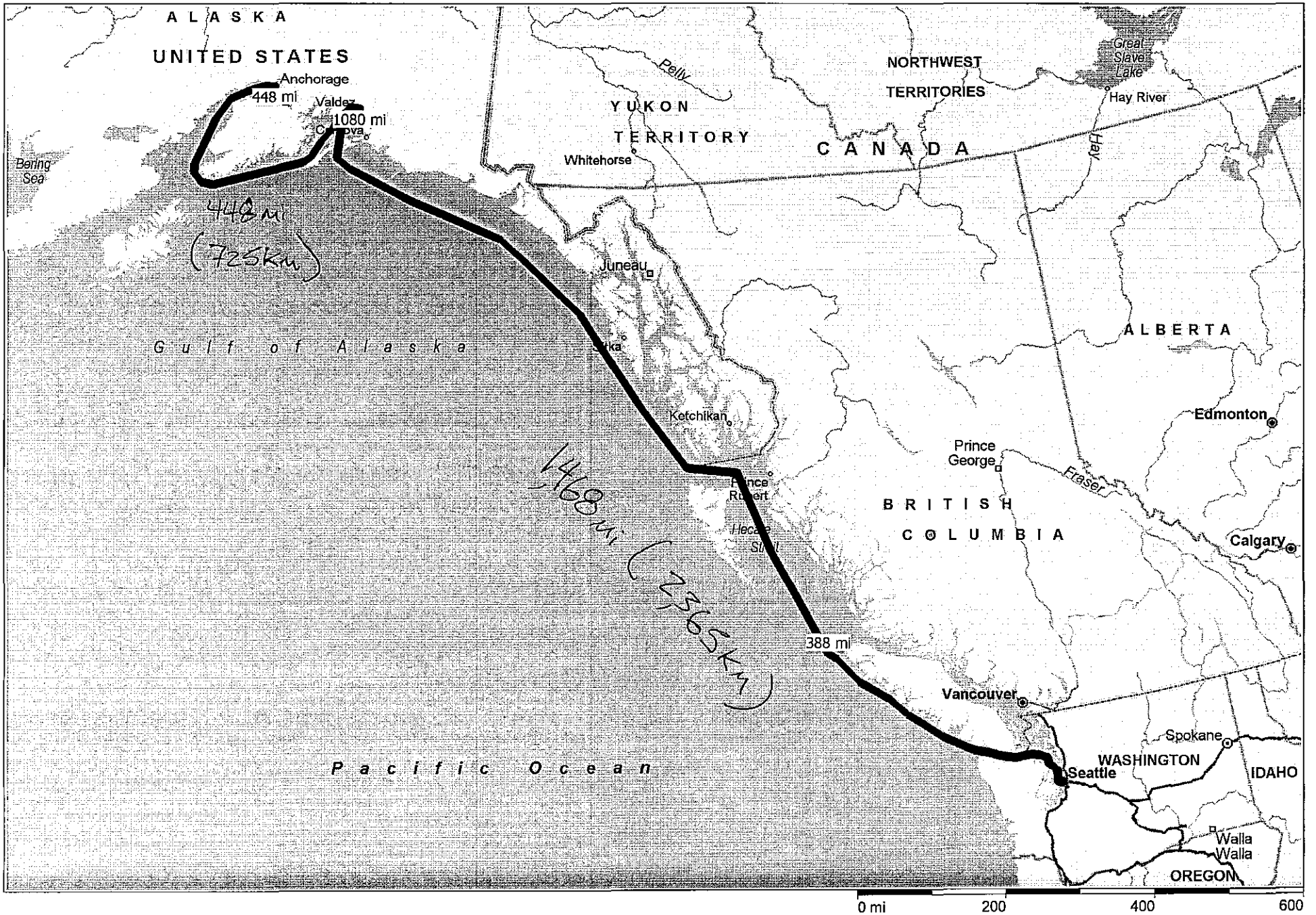
East Site Rubble-Mound 320-Boat Plan
Detailed Quantity Estimate

Item	Quantity	Unit
Breakwaters		
East Breakwater		
Armor rock placement	12,180	m^3
Secondary rock placement	6,980	m^3
Core rock placement	11,590	m^3
South Breakwater		
Armor rock placement	18,370	m^3
Secondary rock placement	10,160	m^3
Core rock placement	25,750	m^3
Breach Stub Breakwater		
Armor rock placement	650	m^3
Secondary rock placement	520	m^3
Core rock placement	230	m^3
Hydrographic surveys	3	ea
Navigation aid foundation	2	ea
Entrance & Maneuvering Channel Dredging	2.0	hec
Dredging	65,630	m^3
Slope protection	3,870	m^3
Mooring Basin	3.5	hec
Dredging	120,780	m^3
Slope protection	2,650	m^3
Local Harbor Facilities		
Design/construct floats & Utilities	1	LS
Access road	120	m
Relocate/bury fiber optic cable	1	LS
Dredge Material Disposal		
Upland disposal berm	532	m
Slope protection	4,420	m^3
Core rock placement	30,670	m^3
Upland disposal	41,610	m^3
Offshore disposal	144,800	m^3

Seattle to Valdez



City of Valdez Floats D and E Replacement Quantity Take-Offs, Cost Estimate, and original Bid Schedule

TETRA TECH, INC.

CLIENT ALASKA DISTRICT, USACE | JOB NO. T22303 | PAGE 1 of 3
PROJECT VALDEZ SMALL BOAT HARBOR | COMPUTED BY N.S.S. | DATE 04/08/08
DETAIL QUANTITY TAKE-OFF | CHECKED BY I.G.P. | DATE 04/08/08

DESCRIPTION	QUANTITY
① 10' (3.05m) WIDE MAIN TIMBER FLOAT.	$\Sigma L^* = \left[5(1.1") + 1" + 1" + 0.8"\right]\left(\frac{100m}{1.05"}\right)$ $\Sigma L^* = 790.47\ m$ $A = \text{Length (L)} \times \text{Width}$ $A = (790.47\ m)(3.05\ m)$ $\boxed{A = 2,409.24\ m^2}$
② 12' (3.66 m) WIDE MARGINAL TIMBER FLOAT.	$L^* = 3.15"\left(\frac{100m}{1.05"}\right)$ $L^* = 300\ m$ $A = (300\ m)(3.66\ m)$ $\boxed{A = 1,097.23\ m^2}$
③ 4' (1.22m) × 30' (9.14 m) TIMBER STALL FLOAT.	$\Sigma L^*_{STALL\ FLOATS} = \left[(118_{STALL\ FLOATS})(0.10") + \ldots\right.$ $\ldots + (27_{STALL\ FLOATS})(0.125") + (5_{STALL\ FLOATS})(0.15") +$ $\left.\ldots + (3_{STALL\ FLOATS})(0.3")\right]\left(\frac{100m}{1.05"}\right)$ $\Sigma L^*_{STALL\ FLOATS} = 1,602.38\ m$ $\text{No. STALL FLOATS} = \frac{1,602.38\ m}{9.14\ m}$ $\text{NO. STALL FLOATS} = 175.25$ $\boxed{\text{NO. STALL FLOATS} = 176}$ $A = (1602.38\ m)(1.22\ m)$ $\boxed{A = 1953.53\ m^2}$
④ TOTAL LENGTH OF MAIN & MARGINAL FLOATS	$\Sigma L^* = 790.47\ m + 300\ m$ $\boxed{\Sigma L^* = 1,090.47\ m}$

* SCALED FROM FIGURE 9 OF THE USACE's "DRAFT INTEGRATED FEASIBILITY REPORT AND ENVIRONMENTAL ASSESSMENT, VALDEZ, ALASKA."

TETRA TECH, INC.

CLIENT ALASKA DISTRICT, USACE | JOB NO. T22303 | PAGE 2 of 3
PROJECT VALDEZ SMALL BOAT HARBOR | COMPUTED BY N.S.S. | DATE 04/08/08
DETAIL QUANTITY TAKE-OFF | CHECKED BY I.G.P. | DATE 04/08/08

DESCRIPTION	QUANTITY
⑤ 16" STEEL PILES DRIVEN ASSUME NO. OF PILES ALONG MARGINAL FLOAT = 1 pile / 50' =... ...= 1 pile / 15.24m per TNH plans of existing harbor conditions.	Σ PILE NUMBER ALONG MAIN FLOAT* = 84 Σ PILE NUMBER ALONG MARGINAL FLOAT* = 20 Σ = 84 + 20 **Σ = 104 piles**
⑥ TOTAL LENGTH OF 16" STEEL PILES. ASSUME 1 PILE = 50' (15.24m)	$L = (104 \text{ piles})\left(\frac{15.24 \text{ m}}{\text{pile}}\right)$ **L = 1,584.96 m**
⑦ 12" STEEL PILES DRIVEN ASSUME 1 pile per stall float. THERE ARE 176 STALL FLOATS.	$\Sigma = (176 \text{ STALL FLOATS})\left(\frac{1 \text{ PILE}}{\text{STALL FLOAT}}\right)$ **Σ = 176 PILES**
⑧ TOTAL LENGTH OF 12" STEEL PILES	$L = (176 \text{ PILES})\left(\frac{15.24 \text{ m}}{\text{pile}}\right)$ **L = 2,682.24 m**
⑨ NUMBER OF 130 lb. ANODES. ASSUME THE NUMBER OF 130 lb. ANODES EQUALS THE NUMBER OF 16" PILES.	**Σ = 104 ANODES**
⑩ NUMBER OF 100 lb. ANODES ASSUME THE NUMBER OF 100 lb. ANODES EQUALS THE NUMBER OF 12" PILES	**Σ = 176 ANODES**
⑪ LEVELING FLOTATION ASSUME 90 CU. FT. OF FLOTATION PER MAIN FLOAT.	$V = (8 \text{ MAIN FLOATS})\left(\frac{90 \text{ CU. FT.}}{\text{MAIN FLOATS}}\right)$ **V = 720 CU. FT.**

* SEE PAGE 1.

DESCRIPTION	QUANTITY
(12) FURNISH AND INSTALL FIRE EXTINGUISHERS ON FLOATS ASSUME 2 FIRE EXTINGUISHERS PER MAIN FLOAT.	$\Sigma = (8 \text{ MAIN FLOATS})\left(\frac{2 \text{ FIRE EX.}}{\text{MAIN FLOAT}}\right)$ $\Sigma = 16$ FIRE EX.
(13) FURNISH AND INSTALL LIFE RINGS ON FLOATS ASSUME 2 LIFE RINGS PER MAIN FLOAT.	$\Sigma = (8 \text{ MAIN FLOATS})\left(\frac{2 \text{ LIFE RINGS}}{\text{MAIN FLOAT}}\right)$ $\Sigma = 16$ LIFE RINGS
(14) FURNISH AND INSTALL SAFETY LADDERS ON FLOATS ASSUME 22 SAFETY LADDERS PER MAIN FLOAT.	$\Sigma = (8 \text{ MAIN FLOATS})\left(\frac{22 \text{ LADDERS}}{\text{MAIN FLOAT}}\right)$ $\Sigma = 176$ SAFETY LADDERS
(15) FURNISH AND INSTALL DIRECT READING METERS ASSUME 1 DIRECT READING METER PER VESSEL: 320 VESSELS.	$\Sigma = 320$ METERS
(16) FURNISH AND INSTALL WIRELESS METERS AND TRANSMITTORS. ASSUME 1 METER/TRANSMITTOR PER VESSEL, 320 VESSELS.	$\Sigma = 320$ VESSELS

Valdez Small Boat Harbor - Quantity Take-Off

Item No.	Description	Quantity	Metric Unit	English Quantity	English Unit
1	Mobilization/Demobilization	1	L.S.	1	L.S.
4	Furnish and Install 10' Wide Timber Main Float	2,410	Sq. Meters	25,944	S.F.
5	Furnish and Install 12' Wide Timber Marginal Float	1,098	Sq. Meters	11,820	S.F.
6	Furnish and Install 4' x 30' Timber Stall Float	176	E.A.	176	E.A.
7	16" Diam. X 1/2" Wall, Steel Piles, Furnished	1,585	Meters	5,200	L.F.
8	16" Diam. X 1/2" Wall, Steel Piles, Driven	104	E.A.	104	E.A.
9	12" Diam. X 1/2" Wall, Steel Piles, Furnished	2,682	Meters	8,800	L.F.
10	12" Diam. X 1/2" Wall, Steel Piles, Driven	176	E.A.	176	E.A.
11	130 lb. Anode, Furnished and Installed	104	E.A.	104	E.A.
12	100 lb. Anode, Furnished and Installed	176	E.A.	176	E.A.
13	Connection and Retrofit @ new to New Float Int	1	L.S.	1	L.S.
14	Levelling Flotation, Furnished		Cubic Meters	720	C.F.
15	Levelling Flotation, Installed		Cubic Meters	720	C.F.
16	Furnish and Install Potable Water System on Floats	1	L.S.	1	L.S.
17	Furnish and Install Fire Protection System on Floats	1	L.S.	1	L.S.
18	Furnish and Install Sewer System on Floats B&C	1	L.S.	1	L.S.
19	Furnish and Install Fire Extinguishers on Floats	16	E.A.	16	E.A.
20	Furnish and Install Life Rings on Floats	16	E.A.	16	E.A.
21	Furnish and Install Safety Ladders on Floats	176	E.A.	176	E.A.
22	Furnish and Install Electrical Power System	1	L.S.	1	L.S.
23	Furnish and Install Direct Reading Meters	320	E.A.	320	E.A.
24	Furnish and Install Spare Parts and Materials	1	L.S.	1	L.S.
25	Furnish and Install Wireless Meters & Transmitters	320	E.A.	320	E.A.
26	Furnish and Install Receiver, Interface hard/software	1	L.S.	1	L.S.

Fiber Optic Cable Relocation Estimate Provided by GCI Utility Company

Valdez Cable Move - New Small Boat Harbor

Pep Work						
	Engineering & Survey	Lump Sum	1	$ 20,000		
	Easement Acquisition	Lump Sum	1	$ 7,500		
	Permits	Lump Sum	1	$ 20,000		
	Contracts Developed	Lump Sum	1	$ 5,000		
					$ 52,500	
Mobilize						
	Cable Splice Gear	Lump Sum	1	$ 65,000		
	Cable Handling gear	Lump Sum	1	$ 75,000		
	Vessel	Lump Sum	1	$ 7,000		
	Crew - Splicers and Cable handlers	Lump Sum	1	$ 9,500		
	Divers	Lump Sum	1	$ 65,000		
	Dive Support Boat	Lump Sum	1	$ 28,500		
					$250,000	
Operations						
	Load Cable Seward	Day Rate	1	$ 21,750	$ 21,750	
	Transit	Day Rate	1	$ 21,750	$ 21,750	
	Set Vessel mooring at intercept position	Day Rate	1	$ 21,750	$ 21,750	
	Dig Trench from BMH to shoreline	Lump Sum	1	$ 30,000	$ 30,000	
	Place cable in land segment and prep BMH fibers	Lump Sum	1	$ 12,550	$ 12,550	
	Lay cable to intercept point	Day Rate	0.5	$ 21,750	$ 10,875	
	Vessel set in moorings	Day Rate	0.5	$ 21,750	$ 10,875	
	Divers expose and remove armor protectors on existing	Day Rate	4	$ 8,575	$ 34,300	
	Divers cut and recover existing cable	Day Rate	0.5	$ 21,750	$ 10,875	Start of cable outage
	Complete UQJ splice and beach splice	Day Rate	1	$ 21,750	$ 21,750	
	Test	Day Rate	1	$ 21,750	$ 21,750	
	deploy UQJ splice	Day Rate	0.5	$ 21,750	$ 10,875	End of cable outage
	Vessel move off moorings	Day Rate	0.5	$ 21,750	$ 10,875	
	Divers reinstall recovered Armor protectors	Day Rate	4	$ 8,575	$ 34,300	
	As-laid records	Lump Sum	1	$ 15,000	$ 15,000	
					$289,275	
Demobilize						
	Off load cable	Day Rate	1	$ 21,750		
	Inventory Splices	Lump Sum	1	$ 5,000		
	Vessel off Charter	Lump Sum	1	$ 10,000		
	Cable & Splices	Lump Sum	1	$ 73,250		
					$110,000	
					$701,775	

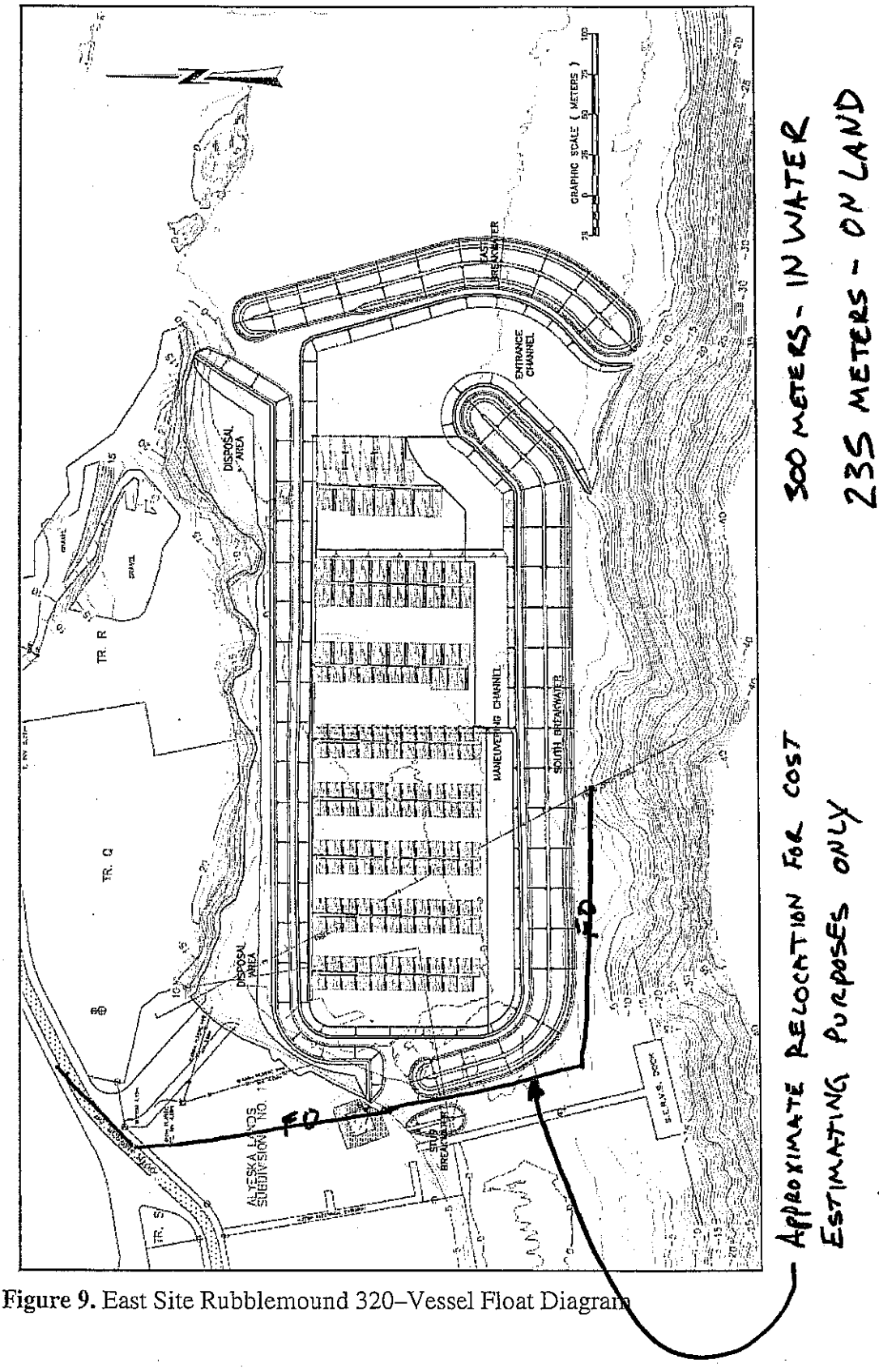


Figure 9. East Site Rubblemound 320–Vessel Float Diagram

APPENDIX D
Production Index Calculation and Notes
Estimated Production Rates

PRODUCTION INDEX

NOTES. Enter percentage values in the yellow cells only. If a condition does not apply or it is already applied in the project then enter 100%.

PRODUCTION ELEMENTS	CONDITION	STATE	Production Efficiency Percent (%) Range		COMMENTS
1. Project Difficulty	**complicated**	One of a kind, hard to reach areas, overly congested, tunnel work.	*55%-85%*	80%	- Careful not to duplicate Project Difficulty. Enter 100% if Project Difficulty is already considered in the production rate of each individual cost item in the estimate.
	normal	Nature of work is common. Straightforward design. Normal site access.	*85%-100%*		
	Production efficiency resulting from project difficulty:			**80%**	
2. Method of Construction	**Low Equip - High Labor**	Unfavorable terrain, labor intensive, limited heavy equipment use	*25%-55%*		
	Medium Equip - Medium Labor	Average terrain, normal equipment and labor use	*55%-85%*		
	High Equip - Low Labor	Favorable terrain, extensive heavy equipment operation	*85%-100%*	90%	
	Production efficiency resulting from method of construction:			**90%**	
3. Labor	**shortage**	Remote area, poor training, low pay, scarce supply	*25%-55%*		- Availability of drug-free construction workers is an issue on many areas. - Shortage of labor forces in remote and specific geographic areas could be a problem.
	average	Suburban area, average training, average pay, normal supply	*55%-85%*	80%	
	surplus	Urban area, good training, good pay, surplus skilled labor supply	*85%-100%*		
	Production efficiency resulting from labor:			**80%**	
4. Supervision	**poor**	Inexperienced, low pay, 8(a) and HUB Zone Contracts	*25%-55%*		- We should not compensate contractors for having poor managers on their staff, however recognize that small contractors working on Govt projects have less experience and construction alliances.
	average	Average experience and training, average pay	*55%-85%*		
	good	Experienced, good pay, IFB Contracts	*85%-100%*	90%	
	Production efficiency resulting from supervision:			**90%**	
5. Job Conditions	**poor**	Emergency work, required first rate workmanship, short length of operations	*25%-55%*		
	average	Average site, regular workmanship required, average length of operations	*55%-85%*	55%	
	good	Favorable site, passable workmanship required, long length of operations	*85%-100%*		
	Production efficiency resulting from job conditions:			**55%**	
6. Weather	**bad**	Much precipitation, bitter cold, oppressive heat	*25%-55%*	30%	- Time extension for unusually severe weather and anticipated weather delays are covered under the Contract Clauses. This factor accounts for "normal" weather at the project site (i.e. Alaska, Las Vegas)
	fair	Some precipitation, moderate cold, moderate heat	*55%-85%*		
	good	Occasional precipitation, occasional cold, occasional heat	*85%-100%*		
	Production efficiency resulting from weather:			**30%**	
7. Expected Delays	**numerous**	Security restrictions (military bases), HTRW, Poor job flexibility, slow delivery, poor expediting	*25%-55%*		
	some	Limited number of work hours (residential proximity), normal delivery, average expediting	*55%-85%*	65%	
	minimum	Job flexibility, prompt delivery, good expediting	*85%-100%*		
	Production efficiency resulting from delays:			**65%**	

AVERAGE PRODUCTION EFFICIENCY PERCENT: **70%** ← **Enter in (MCACES) Mii**

* Each production element (8) carries equal weight.
* Apply to Direct Bare labor and equipment cost.

LABOR AND EQUIPMENT COST INCREASE: **43%** ← **For information only**

* Apply to Direct Bare labor and equipment cost.

(1 / Production Eff.) -1: MCACES (Mii) calculation method.

*** Average production efficiency percent of 70% represents 43% increase in direct labor and equipment costs.**

Production Index Notes.

For some time now, economic conditions and other factors have drastically affected the way estimates are computed in the industry. Consequently, I tabulated known economic information, applied productivity range factors based on my judgment, averaged them out and called it Production Index.

The Production Index encompass general factors affecting Government Estimates (GE) such as project difficulty, method of construction, labor availability, supervision, job conditions, weather and expected delays.

The Production Index is computed by adding the production efficiencies of each element and dividing the sum by the number of elements (i.e. arithmetic mean). Once the Production Index is calculated in EXCEL, it is applied to the labor and equipment costs at the bare cost level in the Mii estimate.

The Production Index does not account for objective construction costs, contingency and inflation. Direct construction costs such as fuel, material prices and overtime should be considered as usual. The Production Index is based on known factors and therefore it is not a contingency factor or a risk analysis tool, since it does not measure uncertainty.

In developing the Production Index care was taken to abide by our Regulations.
EI 01D010 (1 September 1997), paragraph 13-2 quotes: "Each Government estimate for procurement will reflect the fair and reasonable cost to a prudent contractor for performing the scope specified. Although contractor bids will reflect the anticipated competitiveness, the Government estimate must remain the "yardstick" against which cost reasonableness is judged. Therefore, Government estimates can contain adjustments due to quotations on direct and indirect costs, but no separate adjustment due to competitiveness or bid strategies."

Estimators are encouraged to implement the Production Index on all civil and military estimates, except projects under construction (modifications) or dredging projects. If the estimator chooses to use the Production Index then detailed comments must be included in the MCACES (Mii) notes.

Finally, particular care should be taken with on-going project estimates.

Tetra Tech
TITLE: VALDEZ SMALL BOAT HARBOR
SUBJECT: OUTPUT RATE DREDGING Date: May 10, 2010

HARBOR DREDGING

CREW:
Dredging Crew
Crane w/ Clamshell Bucket
8 - Crew Members

PRODUCTION

7.65	cm bucket
0.65	% fill
45	min/hr
0.83	cycle/min

Output 186 cm/hr **OVERTIME** 1857 cm/ 10 hr shift

DISPOSAL

CREW:
Dump Scow & Tug Crew
1000 HP Tug Boat
3 - Dump Scow Barges
8 - Crew Members

PRODUCTION

96	km round trip to disposal site
2	dump scow/trip to disposal site
1150	cm/dump scow
5	knots/hr
2	hr coordination at disposal site

Output 186 cm/hr

OVERTIME
Assume 2 dump scows to disposal site takes 15 hr 2300 cm/15 hr
The other dump scow will remain at harbor to continue dredging operations

---

Tetra Tech
TITLE: VALDEZ SMALL BOAT HARBOR
SUBJECT: FAST LAND CREATION Date: May 10, 2010

HARBOR DREDGING

CREW:
Dredging Crew
Crane w/ Clamshell Bucket
8 - Crew Members

PRODUCTION

7.65	cm bucket
0.65	% fill
45	min/hr
0.83	cycle/min

Output 186 cm/hr **OVERTIME** 1857 cm / 10 hr shift →

2,300 cm/186 cm/hr = 12.5 hrs to load two dump scows

HAULING/DISPOSAL

CREW:
Dump Scow & Tug Crew
1000 HP Tug Boat
3 - Dump Scow Barges
8 - Crew Members

PRODUCTION

0.5	km round trip to disposal site
1	dump scow/trip to disposal site
1150	cm/dump scow
5	knots/hr
1	hr coordination at disposal site

Output 1091 cm/hr

OVERTIME 10,910 cm / 10 hr shift →

41,610 cm / 10,910 cm = 4 days of hauling

OFF LOADING

CREW:
Dredge Material Off Load Crew
Hydraulic Crane
4 - Crew Members

PRODUCTION

1	dump scow/trip to disposal site
15	cm/skip
6	min/skip for off load
2.5	cm/min for off load
50	min/hr

Output 125 cm/hr

OVERTIME 1,250 cm / 10 hr shift →

Tetra Tech
TITLE: VALDEZ SMALL BOAT HARBOR
SUBJECT: OUTPUT RATE BREAKWATER

Date: May 10, 2010

CORE ROCK PLACEMENT

CREW:

Rock Placement Crew
Crane w/ Clamshell Bucket
11 - Crew Members

PRODUCTION

3.8	cm bucket
0.85	% fill
45	min/hr
0.75	cycle/min

			OVERTIME
Output	109	cm/hr	1090 cm/ 10 hr shift

SECONDARY ROCK PLACEMENT

CREW:

Rock Placement Crew
Crane w/ Clamshell Bucket
11 - Crew Members

PRODUCTION

3.8	cm bucket
0.6	% fill
45	min/hr
0.65	cycle/min

			OVERTIME
Output	67	cm/hr	667 cm/ 10 hr shift

ARMOR ROCK PLACEMENT

CREW:

Rock Placement Crew
Crane w/ Clamshell Bucket
11 - Crew Members

PRODUCTION

3.8	cm bucket
0.45	% fill
45	min/hr
0.6	cycle/min

			OVERTIME
Output	46	cm/hr	462 cm/ 10 hr shift

Tetra Tech
TITLE: VALDEZ SMALL BOAT HARBOR
SUBJECT: OUTPUT RATE HARBOR FLOATS AND FACILITIES Date: May 10, 2010

PILE DRIVING

CREW:

Steel Pile Driving Crew
Pile Driver
1000 HP Tug Boat
9 - Crew Members

PRODUCTION

0.75 mh/m

		OVERTIME
Output	12 m/hr	120 m / 10 hr shift

APPENDIX E
Local Market Labor Rates

General Decision AK20100001 Alaska Statewide (dated 04/16/2010) vs.
MCACES 2009 National Labor Rate Comparison.

	AK Labor Rate	AK Fringe	MCACES 2009 Labor Rate	MCACES 2009 Fringe	Used in Estimate Labor Rate	Used in Estimate Fringe
Carpenter	$34.33	$18.23	$32.49	$10.26	**$34.33**	**$18.23**
Electrician	$37.30	$19.57	$36.93	$13.40	**$37.30**	**$19.57**
Piledriver	$33.33	$18.23	$32.69	$10.26	**$33.33**	**$18.23**
Power Equipment Operator						
Group 1	$37.99	$16.95	$33.96	$12.95	**$37.99**	**$16.95**
Group 2	$35.46	$16.95	$33.47	$12.95	**$35.46**	**$16.95**
Group 3	$34.74	$16.95	$33.05	$12.95	**$34.74**	**$16.95**
Group 4	$28.53	$16.95	$30.69	$12.95	**$30.69**	**$16.95**
Ironworker	$33.25	$19.64	$34.40	$16.87	**$34.40**	**$19.64**
Laborer						
Laborer	$28.74	$16.65	$29.66	$7.46	**$29.66**	**$16.65**
Painter						
Painter	$31.85	$15.29	$31.85	$15.29	**$31.85**	**$15.29**
Cement Mason/Concrete Finisher	$34.04	$16.40	$34.68	$11.13	**$34.68**	**$16.40**
Plumbers	$35.58	$18.12	$42.78	$16.51	**$42.78**	**$18.12**
Truck Driver						
Group 1	$36.78	$14.30	$31.37	$11.88	**$36.78**	**$14.30**
Group 2	$35.56	$14.30	$30.57	$11.88	**$35.56**	**$14.30**

GENERAL DECISION: AK20100001 04/16/2010 AK1

Date: April 16, 2010
General Decision Number: AK20100001 04/16/2010

Superseded General Decision Number: AK20080001

State: Alaska

Construction Types: Building and Heavy

Counties: Alaska Statewide.

BUILDING AND HEAVY CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments up to and including 4 stories)

Modification Number	Publication Date
0	03/12/2010
1	03/19/2010
2	04/09/2010
3	04/16/2010

ASBE0097-001 01/01/2010

	Rates	Fringes
Asbestos Workers/Insulator (includes application of all insulating materials protective coverings, coatings and finishings to all types of mechanical systems)	$ 35.64	13.98

ASBE0097-002 01/01/2010

	Rates	Fringes
HAZARDOUS MATERIAL HANDLER (includes preparation, wetting, stripping, removal scrapping, vacuming, bagging, and disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems)	$ 27.35	14.10

BOIL0502-002 10/01/2008

	Rates	Fringes
BOILERMAKER	$ 43.94	19.68

BRAK0001-002 07/01/2008

	Rates	Fringes
Bricklayer, Blocklayer,		

Stonemason, Marble Mason,
Tile Setter, Terrazzo Worker.....$ 33.82 15.80
Tile & Terrazzo Finisher.....$ 28.65 15.80

CARP1243-003 07/01/2009

North of the 63rd Parallel

	Rates	Fringes
Carpenter/Lather/Drywall Applicator	$ 34.33	18.55
Carpenter: Fire or Flood Repair Work	$ 34.33	18.55
MILLWRIGHT	$ 33.39	16.08

CARP1281-004 07/01/2009

SOUTH OF 63RD PARALLEL

	Rates	Fringes
Acoustical Applicator and Lather	$ 34.33	18.23
Carpenters & Drywallers	$ 34.33	18.23
MILLWRIGHT	$ 33.39	16.08

CARP2520-003 07/01/2009

	Rates	Fringes
Diver		
Stand-by	$ 38.50	18.23
Tender	$ 37.50	18.23
Working	$ 77.00	18.23
Piledriver		
Carpenter	$ 34.33	18.23
Piledriver; Skiff Operator and Rigger	$ 33.33	18.23
Sheet Stabber	$ 34.33	18.23
Welder	$ 35.33	18.23

DEPTH PAY PREMIUM FOR DIVERS BELOW WATER SURFACE:
50-100 feet $1.00 per foot
101 feet and deeper $2.00 per foot

ENCLOSURE PAY PREMIUM WITH NO VERTICAL ASCENT:
5-50 FEET $1.00 PER FOOT/DAY
51-100 FEET $2.00 PER FOOT/DAY
101 FEET AND ABOVE $3.00 PER FOOT/DAY

SATURATION DIVING:
The standby rate applies until saturation starts. The saturation diving rate applies when divers are under pressure continuously until work task and decompression are complete. the diver rate shall be paid for all saturation hours.

WORK IN COMBINATION OF CLASSIFICATIONS:
Employees working in any combination of classifications

within the diving crew (except dive supervisor) in a shift are paid in the classification with the highest rate for that shift.

ELEC1547-004 03/29/2010

	Rates	Fringes
CABLE SPLICER	$ 47.85	3%+23.00
Electrician;Technician	$ 37.30	.03%+$19.57

ELEC1547-005 12/28/2009

Line Construction

	Rates	Fringes
CABLE SPLICER	$ 47.85	3%+23.00
Line Construction: (Tree Trimmer Shredder)	$ 33.40	3%+$20.65
Linemen (Including Equipment Operators, Technician)	$ 46.10	3%+22.15
Powderman	$ 44.10	3%+23.00
TREE TRIMMER	$ 44.60	3%+$20.65

ELEV0019-002 01/01/2010

	Rates	Fringes
ELEVATOR MECHANIC	$ 46.635	20.24

FOOTNOTE: a. Employer contributes 8% of the basic hourly rate for over 5 year's service and 6% of the basic hourly rate for 6 months to 5 years' of service as vacation paid credit. b. Eight paid holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Veteran's Day; Thanksgiving Day; Friday after Thanksgiving and Christmas Day

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ENGI0302-002 01/01/2010

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 36.23	16.95
GROUP 1A	$ 37.99	16.95
GROUP 2	$ 35.46	16.95
GROUP 3	$ 34.74	16.95
GROUP 4	$ 28.53	16.95
TUNNEL WORK		
GROUP 1	$ 39.85	16.95
GROUP 1A	$ 41.79	16.95
GROUP 2	$ 39.01	16.95
GROUP 3	$ 38.21	16.95
GROUP 4	$ 31.83	16.95

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Asphalt Roller; Back Filler; Barrier Machine (Zipper); Batch Plant Operator: Batch and Mixer over 200

yds.; Beltcrete with power pack and similar conveyors; Bending Machine; Boat Coxwains; Bulldozers; Cableways, Highlines and Cablecars; Cleaning Machine; Coating Machine; Concrete Hydro Blaster; Cranes-45 tons and under or 150 foot boom and under (including jib and attachments): (a) Shovels, Backhoes, excavators with all attachments, Draglines, Clamshells; Gradalls-3 yards and under; (b) Hydralifts or Transporters, all track or truck type,(c) Derricks; Crushers; Deck Winches-Double Drum; Ditching or Trenching Machine (16 inch or over); Drilling Machines, core, cable, rotary and exploration; Finishing Machine Operator, concrete paving, Laser Screed, sidewalk, curb and gutter machine; Helicopters; Hover Craft, Flex Craft, Loadmaster, Air Cushion, All Terrain Vehicle, Rollagon, Bargecable, Nodwell Sno Cat; Hydro Ax: Feller Buncher and similar; Loaders: Forklifts with power boom and swing attachment, Overhead and front end, 2 1/2 yards through 5 yards, Loaders with forks or pipe clamps, Loaders, elevating belt type, Euclid and similar types; Mechanics, Bodyman; Micro Tunneling Machine; Mixers: Mobile type w/hoist combination; Motor Patrol Grader; Mucking Machines: Mole, Tunnel Drill, Horizontal/Directional Drill Operator, and/or Shield; Operator on Dredges; Piledriver Engineers, L. B. Foster, Puller or similar Paving Breaker; Power Plant, Turbine Operator, 200 k.w. and over (power plants or combination of power units over 300 k.w.); Sauerman-Bagley; Scrapers-through 40 yards; Service Oiler/Service Engineer; Sidebooms-under 45 tons; Shot Blast Machine; Spreaders, Blaw Knox, Cedarapids, Barber Greene, Slurry Machine; Sub-grader (Gurries, C.M.I. and C.M.I. Roto Mills and similar types); Tack tractor; Truck mounted Concrete Pumps, Conveyor, Creter; Water Kote Machine; Unlicensed off road hauler; Welder; Electrical Mechanic, Camp Maintenance Engineer

GROUP 1A: Cranes-over 45 tons or 150 foot (including jib and attachments): (a) Shovels, backhoes,excavators with all attachments, draglines, clamshells-over 3 yards, (b) Tower cranes;Licensed Water/Waste Water Treatment Operator; Loaders over 5 yds.;Certified Welder, Electrical Mechanic, Camp Maintenance Engineer, Mechanic (over 10,000 hours); Motor Patrol Grader, Dozer, Grade Tractor (finish: when finishing to final grade and/or to hubs, or for asphalt); Power Plants: 1000 k.w. and over; Quad; Screed; Sidebooms over 45 tons; Slip Form Paver C.M.I. and similar types; Scrapers over 40 yards; Camera/Tool/Video Operator (Slipline).

GROUP 2: Batch Plant Operators: Batch and Mixer 200 yds. per hour and under; Boiler-fireman; Cement Hog and Concrete Pump Operator; Conveyors (except as listed in group 1); Hoist on steel erection; Towermobiles and Air Tuggers; Horizontal/Directional Drill Locator;Licensed Grade Technician; Loaders, Elevating Grader, Dumor and similar; Locomotives: rod and geared engines; Mixers; Screening, Washing Plant; Sideboom (cradling rock drill regardless of size); Skidder; Trencing Machine under 16 inches; Waste/ Waste Water Treatment Operator.

GROUP 3: "A" Frame Trucks, Deck Winches: single power drum;

Bombardier (tack or tow rig); Boring Machine; Brooms-power; Bump Cutter; Compressor; Farm tractor; Forklift, industrial type; Gin Truck or Winch Truck with poles when used for hoisting; Grade Checker and Stake Hopper; Hoist, Air Tuggers, Elevators; Loaders: (a) Elevating-Athey, Barber Green and similar types (b) Forklifts or Lumber Carrier (on construction job site) (c) Forklifts with Tower (d) Overhead and Front-end, under 2 1/2 yds. Locomotives:Dinkey (air, steam, gas and electric) Speeders; Mechanics (light duty); Mixers: Concrete Mixers and Batch 200 yds. per hour and under; Oil, Blower Distribution; Post Hole Diggers, mechanical; Pot Fireman (power agitated); Power Plant, Turbine Operator, under 300 k.w.; Pumps-water; Roller-other than Plantmix; Saws, concrete; Skid Steer with all attachments; Straightening Machine; Tow Tractor

GROUP 4: Rig Oiler/Assistant Engineer (if over 85 tons or 100 ft. boom);Parts and Equipment Coordinator; Swamper (on trenching machines or shovel type equipment); Spotter; Steam Cleaner; Drill Helper.

FOOTNOTE: Groups 1-4 receive 10% premium while performing tunnel or underground work. Rig Oiler/Assistant Engineer shall be required on cranes over 85 tons or over 100 feet of boom.

IRON0751-003 08/01/2009

	Rates	Fringes
Ironworkers:		
BRIDGE, STRUCTURAL, ORNAMENTAL, REINFORCING MACHINERY MOVER, RIGGER, SHEETER, STAGE RIGGER, BENDER OPERATOR	$ 33.25	19.64
FENCE, BARRIER AND GUARDRAIL INSTALLERS	$ 29.75	19.39
GUARDRAIL LAYOUT MAN	$ 30.49	19.64
HELICOPTER, TOWER	$ 34.25	19.64

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* LABO0341-005 09/01/2009

	Rates	Fringes
Laborers: North of the 63rd Parallel & East of Longitude 138 Degrees		
GROUP 1	$ 28.74	16.65
GROUP 2	$ 29.67	16.65
GROUP 3	$ 30.50	16.65
GROUP 3A	$ 33.52	16.65
GROUP 3B	$ 34.29	16.65
GROUP 4	$ 19.13	16.65
TUNNELS, SHAFTS, AND RAISES		
GROUP 1	$ 31.57	16.65
GROUP 2	$ 32.60	16.65
GROUP 3	$ 33.52	16.65
GROUP 3A	$ 36.84	16.65
GROUP 3B	$ 37.69	16.65

Laborers: South of the 63rd Parallel & West of Longitude 138 Degrees		
GROUP 1	$ 28.74	16.65
GROUP 2	$ 29.67	16.65
GROUP 3	$ 30.50	16.65
GROUP 3A	$ 33.52	16.65
GROUP 3B	$ 34.29	16.65
GROUP 4	$ 19.13	16.65
TUNNELS, SHAFTS, AND RAISES		
GROUP 1	$ 31.57	16.65
GROUP 2	$ 32.60	16.65
GROUP 3	$ 33.52	16.65
GROUP 3A	$ 36.84	16.65
GROUP 3B	$ 37.69	16.65

LABORERS CLASSIFICATIONS

GROUP 1: Asphalt Workers (shovelman, plant crew); Brush Cutters; Camp Maintenance Laborer; Carpenter Tenders; Choke Setters, Hook Tender, Rigger, Signalman; Concrete Laborer(curb and gutter, chute handler, grouting, curing, screeding); Crusher Plant Laborer; Demolition Laborer; Ditch Diggers; Dump Man; Environmental Laborer (asbestos (limited to nonmechanical systems), hazardous and toxic waste, oil spill); Fence Installer; Fire Watch Laborer; Flagman; Form Strippers; General Laborer; Guardrail Laborer, Bridge Rail Installers; Hydro-Seeder Nozzleman; Laborers (building); Landscape or Planter; Laying of Decorative Block (retaining walls, flowered decorative block 4 feet and below); Material Handlers; Pneumatic or Power Tools; Portable or Chemical Toilet Serviceman; Pump Man or Mixer Man; Railroad Track Laborer; Sandblast, Pot Tender; Saw Tenders; Scaffold Building and Erecting; Slurry Work; Stake Hopper; Steam Point or Water Jet Operator; Steam Cleaner Operator; Tank Cleaning; Utiliwalk, Utilidor Laborer and Conduit Installer; Watchman (construction projects); Window Cleaner

GROUP 2: Burning and Cutting Torch; Cement or Lime Dumper or Handler (sack or bulk); Choker Splicer; Chucktender (wagon, airtrack and hydraulic drills); Concrete Laborers (power buggy, concrete saws, pumpcrete nozzleman, vibratorman); Culvert Pipe Laborer; Cured in place Pipelayer; Environmental Laborer (marine work, oil spill skimmer operator, small boat operator); Foam Gun or Foam Machine Operator; Green Cutter (dam work); Gunnite Operator; Hod Carriers; Jackhammer or Pavement Breakers (more than 45 pounds);Laying of Decorative Block (retaining walls, flowered decorative block above 4 feet); Mason Tender and Mud Mixer (sewer work); Pilot Car; Plasterer, Bricklayer and Cement Finisher Tenders; Power Saw Operator; Railroad Switch Layout Laborer; Sandblaster; Sewer Caulkers; Sewer Plant Maintenance Man; Thermal Plastic Applicator; Timber Faller, chain saw operator, filer; Timberman

GROUP 3: Alarm Installer; Bit Grinder; Guardrail Machine Operator; High Rigger and tree topper; High Scaler; Multiplate; Slurry Seal Squeegee Man

GROUP 3A: Asphalt Raker, Asphalt Belly dump lay down; Drill Doctor (in the field); Drillers (including, but not limited to, wagon drills, air track drills; hydraulic drills); Powderman; Pioneer Drilling and Drilling Off Tugger (all type drills); Pipelayers

GROUP 3B: Grade checker (setting or transfering of grade marks, line and grade)

GROUP 4: Final Building Cleanup

TUNNELS, SHAFTS, AND RAISES CLASSIFICATIONS

GROUP 1: Brakeman; Muckers; Nippers; Topman and Bull Gang; Tunnel Track Laborer

GROUP 2: Burning and Cutting Torch; Concrete Laborers; Jackhammers; Nozzleman, Pumpcrete or Shotcrete.

GROUP 3: Miner; Retimberman

GROUP 3A: Asphalt Raker, Asphalt Belly dump lay down; Drill Doctor (in the field); Drillers (including, but not limited to, wagon drills, air track drills; hydraulic drills); Powderman; Pioneer Drilling and Drilling Off Tugger (all type drills); Pipelayers.

GROUP 3B: Grade checker (setting or transfering of grade marks, line and grade)

Tunnel shaft and raise rates only apply to workers regularly employed inside a tunnel portal or shaft collar.

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* PAIN1959-001 04/01/2010

NORTH OF THE 63RD PARALLEL

	Rates	Fringes
PAINTER		
BRUSH/ROLLER PAINT OR WALL COVERER	$ 31.85	15.29
TAPING, TEXTURING, STRUCTURAL PAINTING, SANDBLASTING, POT TENDER, FINISH METAL, SPRAY, BUFFER OPERATOR, RADON MITIGATION, LEAD BASED PAINT ABATEMENT, HAZARDOUS MATERIAL HANDLER	$ 32.35	15.29

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* PAIN1959-002 04/01/2010

SOUTH OF THE 63RD PARALLEL

	Rates	Fringes
Painters:		
Brush, Roller, Sign, Paper and Vinyl, Swing Stage,		

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     Hand Taper/Drywall,
     Structural Steel, and
     Commercial Spray.....$ 28.18            16.22
     Machine Taper/Drywall.......$ 29.38     16.22
     Spray-Sand/Blast, Epoxy
     and Tar Applicator..........$ 29.48     16.22
----------------------------------------------------------------
* PAIN1959-003 01/01/2010

NORTH OF THE 63RD PARALLEL

                                   Rates          Fringes

GLAZIER.........................$ 30.70            17.17
----------------------------------------------------------------
* PAIN1959-004 06/01/2009

                                   Rates          Fringes

FLOOR LAYER:  Carpet (Soft)
Floor...........................$ 29.99            12.92
----------------------------------------------------------------
 PLAS0867-001 02/10/2010

                                   Rates          Fringes

PLASTERER
     North of the 63rd parallel..$ 34.54           16.40
     South of the 63rd parallel..$ 34.29           16.40
----------------------------------------------------------------
 PLAS0867-004 02/01/2010

                                   Rates          Fringes

CEMENT MASON/CONCRETE FINISHER
     North of the 63rd parallel..$ 34.29           16.40
     South of the 63rd parallel..$ 34.04           16.40
----------------------------------------------------------------
 PLUM0262-002 01/01/2010

East of the 141st Meridian

                                   Rates          Fringes

Plumber; Steamfitter............$ 34.52            19.52
----------------------------------------------------------------
 PLUM0367-002 07/01/2009

South of the 63rd Parallel

                                   Rates          Fringes

Plumber; Steamfitter............$ 35.58            18.12
----------------------------------------------------------------
 PLUM0375-002 07/01/2009

North of the 63rd Parallel

                                   Rates          Fringes
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Plumber; Steamfitter.....$ 37.54 18.12

PLUM0669-002 04/01/2008

	Rates	Fringes
SPRINKLER FITTER.....$	41.05	16.15

ROOF0190-002 09/01/2007

	Rates	Fringes
ROOFER, Including Built Up, Composition and Single Ply Roofs		
North of the 63rd Parallel..$	32.12	10.50
South of the 63rd Parallel..$	32.12	10.50

SHEE0023-003 07/01/2009

South of the 63rd Parallel

	Rates	Fringes
Sheet Metal Worker.....$	38.34	17.70

SHEE0023-004 07/01/2009

North of the 63rd Parallel

	Rates	Fringes
Sheet Metal Worker.....$	41.98	17.31

TEAM0959-003 09/01/2009

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....$	36.78	14.30
GROUP 1A.....$	38.02	14.30
GROUP 2.....$	35.56	14.30
GROUP 3.....$	34.76	14.30
GROUP 4.....$	34.21	14.30
GROUP 5.....$	33.46	14.30

GROUP 1: Semi with Double Box Mixer; Dump Trucks (including rockbuggy and trucks with pups) over 40 yards up to and including 60 yards; Deltas, Commanders, Rollogans and similar equipment when pulling sleds, trailers or similar equipment; Boat Coxswain; Lowboys including attached trailers and jeeps, up to and including 12 axles; Ready-mix over 12 yards up to and including 15 yards); Water Wagon (250 Bbls and above); Tireman, Heavy Duty/Fueler

GROUP 1A: Dump Trucks (including Rockbuggy and Trucks with pups) over 60 yards up to and including 100 yards; Jeeps (driver under load)

GROUP 2: Turn-O-Wagon or DW-10 not self-loading; All Deltas,

Commanders, Rollogans, and similar equipment; Mechanics; Dump Trucks (including Rockbuggy and Trucks with pups) over 20 yards up to and including 40 yards; Lowboys including attached trailers and jeeps up to and including 8 axles; Super vac truck/cacasco truck/heat stress truck; Ready-mix over 7 yards up to and including 12 yards;

GROUP 3: Dump Trucks (including Rockbuggy and Trucks with pups) over 10 yards up to and including 20 yards; batch trucks 8 yards and up; Oil distributor drivers; Partsman; Oil Distributor Drivers; Trucks/Jeeps (push or pull); Traffic Control Technician

GROUP 4: Buggymobile; Semi or Truck and trailer; Dumpster; Tireman (light duty); Dump Trucks (including Rockbuggy and Truck with pups) up to and including 10 yards; Track Truck Equipment; Stringing Truck; Grease Truck; Flat Beds, dual rear axle; Hyster Operators (handling bulk aggregate); Lumber Carrier; Water Wagon, semi; Water Truck, dual axle; Gin Pole Truck, Winch Truck, Wrecker, Truck Mounted "A" Frame manufactured rating over 5 tons; Bull Lifts and Fork Lifts with Power Boom and Swing attachments, over 5 tons; Front End Loader with Forks; Bus Operator over 30 passengers; All Terrain Vehicles; Boom Truck/Knuckle Truck over 5 tons; Foam Distributor Truck/dual axle; Hydro-seeders, dual axle; Vacuum Trucks, Truck Vacuum Sweepers; Loadmaster (air and water); Air Cushion or similar type vehicle; Fire Truck/Ambulance Driver; Combination Truck-fuel and grease; Compactor (when pulled by rubber tired equipment); Rigger (air/water/oilfield); Ready Mix, up to and including 7 yards;

GROUP 5: Gravel Spreader Box Operator on Truck; Flat Beds, single rear axle; Boom Truck/Knuckle Truck up to and including 5 tons; Pickups (Pilot Cars and all light duty vehicles); Water Wagon (Below 250 Bbls); Gin Pole Truck, Winch Truck, Wrecker, Truck Mounted "A" Frame, manufactured rating 5 tons and under; Bull Lifts and Fork Lifts (fork lifts with power broom and swing attachments up to and including 5 tons); Buffer Truck; Tack Truck; Farm type Rubber Tired Tractor (when material handling or pulling wagons on a construction project); Foam Distributor, single axle; Hydro-Seeders, single axle; Team Drivers (horses, mules and similar equipment); Fuel Handler (station/bulk attendant); Batch Truck, up to and including 7 yards; Gear/Supply Truck; Bus Operator, Up to 30 Passengers; Rigger/Swamper

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

APPENDIX F
Emails and Phone Logs

Schreiner, Nathan

From: Pierre Stragier [PierreS@tnh-inc.com]
Sent: Tuesday, April 08, 2008 9:18 AM
To: Schreiner, Nathan
Subject: RE: City of Valdez Small Boat Harbor Bathometric Survey

Attachments: kdb6.jpg; kdb1.jpg; kdb2.jpg; kdb3.jpg


kdb6.jpg (79 KB)

kdb1.jpg (308 KB)

kdb2.jpg (243 KB)

kdb3.jpg (243 KB)

Nathan,

Thanks for the Google Earth reference. That helps a lot.

I did a quick cost estimate coordinating with our boat and bathy equipment rental. With mob/demob, one weather day, use of a multi-beam sonar, useable depths from 1m to 100m, then we can map the port area for roughly $35,000US and Two Moon Bay for $20,000US. This assumes we can do all this work in one trip. Else we have the expense of mob/demob. Our quote also includes monies to set vertical control via GPS methods at Two Moon Bay. We did not include costs for setting a tide gauge at Two Moon Bay. Standards of survey shall be IHO Special Order surveys, per Special Publication No. 44. This order of survey is more stringent that what the COE may require for dredging work.

I've included some pics of our March 17, 2008 bathy survey. Kdb1 is the team fabbing up the boom. I had to purchase a bunch of steel, then cut and weld it to fit the boat. This was challenging as I could not cut or weld to the boat. Plus that transducer weighs 70lbs. Kdb2 is just before official launch. Note the ice in the harbor. Kdb3 is port setup, Kdb6 is starboard.

Cheers,

Pierre M. Stragier, PE, PLS
Senior Engineer/Surveyor
TNH, Inc.
911 W. 8th Avenue, Ste 300
Anchorage, AK 99501
t. 907-279-0543
pierres@tnh-inc.com

>>> "Schreiner, Nathan" <Nathan.Schreiner@tetratech.com> 4/7/2008 1:10
>>> PM >>>
Pierre,

Please find the attached Google Earth placemarks for the proposed harbor and the disposal site (Two Moon Bay). And by the way, use the most conservatively priced mapping standard.

Thanks,
Nathan Schreiner | Engineer, Surface Water Group
Main: 949-250-6788 | Fax: 949-608-5870
nathan.schreiner@tetratech.com | www.ttsurfacewater.com
Tetra Tech | Complex World, Clear Solutions 17770 Cartwright Rd, Ste. 500 | Irvine, CA 92614

-----Original Message-----
From: Pierre Stragier [mailto:PierreS@tnh-inc.com]

Sent: Monday, April 07, 2008 11:37 AM
To: Schreiner, Nathan
Subject: Re: City of Valdez Small Boat Harbor Bathometric Survey Ballpark Cost Estimate

Thanks for the inquiry. I made a quick phone call and the boat we used for the City work can navigate to Two Moons Bay. I'll post a quote by Wed.

Cheers,

Pierre M. Stragier, PE, PLS
Senior Engineer/Surveyor
TNH, Inc.
911 W. 8th Avenue, Ste 300
Anchorage, AK 99501
t. 907-279-0543
pierres@tnh-inc.com

>>> "Schreiner, Nathan" <Nathan.Schreiner@tetratech.com> 4/7/2008 9:40 AM >>>
Dear Pierre,

We're assisting the Alaska District Corps of Engineers by preparing an engineer's cost estimate for the City of Valdez Small Boat Harbor Feasibility Study. Part of this work includes bathometric surveys of the location where the harbor will be and one of where the dredged material will be disposed. Bob Thompson from the City of Valdez recommended we contact you about getting a ballpark estimate of what it would cost and the time it would require to do the work. See below for a further explanation of the bathometric survey areas:

1. Harbor/Breakwater: In-water Area = 26.6 acres; Depth = 0 to -5 meters. Breakwater height = +5 meters.
2. Two Moon Bay Disposal Area: In-water Area = 20 acres; Depth = -5 meters to -15 meters.

We have a tight schedule to provide the Corps this cost estimate and any information that you could provide would be greatly appreciated.

Thank you for your help,

Nathan Schreiner | Engineer, Surface Water Group
Main: 949-250-6788 | Fax: 949-608-5870
nathan.schreiner@tetratech.com | www.ttsurfacewater.com
<http://www.ttsurfacewater.com/>

Tetra Tech | Complex World, Clear Solutions 17770 Cartwright Rd, Ste. 500 | Irvine, CA 92614

TETRA TECH, INC.

PHONE LOG

CLIENT:	The United States Army Corps of Engineers, Alaska District
JOB TITLE:	City of Valdez Small Boat Harbor Cost Estimate
PROJECT NO.:	T22303
SUBJECT:	City of Valdez Small Boat Harbor Cost Estimate
CONVERSATION DATE:	April 8, 2008
PREPARED BY:	Nathan Schreiner
CONVERSATIONALISTS:	Bill Harris of Harris Sand and Gravel (HS&G) and Nathan Schreiner of Tetra Tech, Inc.

This phone log summarizes the items discussed or issues resolved during the phone conversation to the best of the writer's ability.

- What type of equipment and how many laborers did it take to do the float D & E replacement? How long did it take to complete?

Ans.: They had 5 to 6 laborers. It took 3 to 4 months. The equipment they used consisted of a barge, a 60 ton crane, etc.

- How much would it cost for the various types of breakwater rock for the volumes listed below?
  - Armor Rock (49,000 cu. yd.: 2240 lbs. - 3730 lbs.) – ***Ans.: $35*/cu. yd.***
  - B Rock (32,000 cu. yd.: 200 lbs. – 1860 lbs.) - ***Ans.: $30*/cu. yd.***
  - Core Rock (61,000 cu. yd.: 6 lbs. - 200 lbs.) - ***Ans.: $20/cu.yd.***

Ans.: The quarry in City of Valdez might require development work to get the volume of rock the harbor will require. These prices do not include the price of the quarry development. This development could bump the cost of secondary rock (B rock) and armor rock to $40 to $50/cu. yd. respectively, as was quoted to the Corps by HS&G in Dec. 2006.

- What do those prices include (material, delivery, barge loading, placement, etc.)?

Ans. These prices include material, delivery, and placement via land based crane. Placement via an in-water crane would increase these prices.

- How much would it cost to deliver 40,000 C.Y. of bank run to the harbor?

Ans. It would cost $5/cu. yd. to deliver bank run to the site and an additional $2-3/cu. yd. for placement and compaction.

- How much would it cost to pour two navigation pad foundations? (4 C.Y. each)

Ans.: It would cost $2000/pad.

- How much would it cost and how long would it take to dredge 245,000 C.Y. from the relatively shallow waters south of Hotel Hill and transport 35 miles away for dumping?

Ans.: HS&G does not have that much experience with dredging.

- What would it cost to handle, drain, and re-compact dredged material?

Ans.: This really depends on the soil type of the dredged material. However, it cost approximately $30/cu. yd. for HS&G to dredge and re-compact 3000 cu. yd. for the City of Valdez on another project of theirs. This price includes a $15,000 silt fence that was constructed around the dredged area. The cost per cubic yard could possibly be less for a larger project like the proposed small boat harbor that has a higher dredge volume. The material was dried at the local landfill which is 3 mi. out of town. This created some problems. It took approximately 1 month to dry. The best scenario would be to dry the material somewhere adjacent to the site if possible.

- Can work continue through the winter?

Ans.: Yes, work can continue through the winter. Costs tend to go up though.

- Bill's office phone number is (907) 835-4756.
- Bill's cell phone number is (907) 831-0287.
- Nathan's office phone number is (949) 250-6788.

TETRA TECH, INC.

PHONE LOG

CLIENT:	The United States Army Corps of Engineers, Alaska District
JOB TITLE:	City of Valdez Small Boat Harbor Cost Estimate
PROJECT NO.:	T22303
SUBJECT:	City of Valdez Small Boat Harbor Cost Estimate
CONVERSATION DATE:	April 9, 2008
PREPARED BY:	Nathan Schreiner
CONVERSATIONALISTS:	Leonard Juhnke of Manson Construction and Nathan Schreiner of Tetra Tech, Inc.

This phone log summarizes the items discussed or issues resolved during the phone conversation to the best of the writer's ability.

- The Manson Construction office in Seattle was called.
- Leonard Juhnke was spoken to and answered the following questions:
- Mobilization/Demobilization:
    - Mobilization:
        - What is the time required to transport equipment to Valdez, Alaska?
          Ans.: One week to prep in Seattle. 14 days to travel to Valdez.
        - What is the time required to set-up construction facilities?
          Ans.: It would take one month to set-up construction facilities on-site.
        - Mobilization personnel (what is the total crew make-up)?
          Ans.: Dredging – 16 people. Rock work – 12 people. This does not include the number of people to deliver the rock to the site from the quarry. In addition, there will be 4 office people.
    - Demobilization:
        - What is the time required to take down the construction facilities?
          Ans.: Two weeks.
        - What is the time required to transport equipment back to Seattle?
          Ans.: 14 days.
- Dredging: 244,000 cu. yd. from the relatively shallow waters (0 meters to -5 meters).
    - What are the production rates (cu. yd. per hour) & what kind of equipment is used to achieve this?

Ans.: 300 cu. yd. per hr. to 500 cu. yd. per hr. @ 18 hrs. per 24 hr. day. This equals 5400 cu. yd. per day. This rate excludes drilling and shooting of rock. Maybe the rock out there can be broken up with a backhoe.

- What is the time duration to complete the work?
  Ans.: 60 to 90 days.

- Cost to transport and dump 35 miles away in deep water?
  Ans.: $10 per cu. yd. or more. Transport might be affected by winter ocean conditions.

- Breakwater: 142,000 cu. yd.
  - What are the production rates (cu. yd. per hour) & what kind of equipment is used to achieve this?
    Ans.: 100 tons per hr. 7-10 yd. clam shell scooper is used to achieve this.

- Production Schedule:
  - How many hours and shifts per day?
    Ans.: Dredging – Two 12 hour shifts every 24 hours. Rock Placement – One 12 hour shift every 24 hours.
  - How many days per week?
    Ans.: 6 to 7 days.
  - How many weeks per year?
    Ans.: 52 weeks.

TETRA TECH, INC.

PHONE LOG

CLIENT:	The United States Army Corps of Engineers, Alaska District
JOB TITLE:	City of Valdez Small Boat Harbor Cost Estimate
PROJECT NO.:	T22303
SUBJECT:	City of Valdez Small Boat Harbor Cost Estimate
CONVERSATION DATE:	April 9, 2008
PREPARED BY:	Nathan Schreiner
CONVERSATIONALISTS:	Steve of the Dutra Group and Nathan Schreiner of Tetra Tech, Inc.

This phone log summarizes the items discussed or issues resolved during the phone conversation to the best of the writer's ability.

- The Dutra Group Dredging Department in the San Francisco office was called.
- Steve was spoken to and answered the following questions:
- Dredging: 244,000 cu. yd. from the relatively shallow waters (0 meters to -5 meters).
    - What are the production rates (cu. yd. per hour) & what kind of equipment is used to achieve this?
      Ans.: 5000 to 7000 cu. yd. per day. The rate depends on the type of material being dredged. This rate is based on a 7 to 10 cu. yd. clam shell operating at 1 cycle per minute or less for the relatively shallow waters where the harbor will be located and the capability to fill 60 to 70 % of the clam shell with every scoop. These rates will decrease with the more rock encountered.
    - What is the time duration to complete the work?
      Ans.: 60 days.

- Breakwater: 142,000 cu. yd.
    - What are the production rates (cu. yd. per hour) & what kind of equipment is used to achieve this?
      Ans.: 1000 tons per day. This rate is based on a 7-10 cu. yd. clam shell scooper and an excavator on the beach.

- Production Schedule:
    - How many hours and shifts per day?
      Ans.: Dredging – Two 12 hour shifts every 24 hours. Rock Placement – One 12 hour shift every 24 hours.
    - How many days per week?
      Ans.: 7 days.
    - How many weeks per year?
      Ans.: 52 weeks. Rock placement is slightly more weather dependent than dredging.

From: Schreiner, Nathan [mailto:Nathan.Schreiner@tetratech.com]
Sent: Thursday, May 01, 2008 10:10 AM
To: Jerry Neal
Cc: Pace, Ike
Subject: City of Valdez Small Boat Harbor Feasibility Study

Dear Jerry,

As mentioned on the phone, we're assisting the Alaska District Corps of Engineers by preparing an engineer's cost estimate on constructing a new small boat harbor for the City of Valdez. The project is at feasibility study level. The proposed harbor will be located adjacent to the City of Valdez's existing small boat harbor. The proposed harbor will have an area of about 26.6 acres, and will service about 320 vessels 50 feet to 100 feet in length. The total construction time will be 2 to 3 years. We are planning to have the dredging crews work two 12 hour shifts per day for six days per week. The breakwater placement crews are going to work one 12 hour shift per day for 6 days per week. The items we're hoping you can provide estimates on are listed below. Please provide the cost per hour or cost per day for the equipment and mention if that rate includes overhead and profit. Please also mention how the longer shifts factor into the rates.

1. 500 HP Tug -- ***$500 per hour***
2. 1000 HP Tug -- ***$750 per hour***
3. 400 ton Dump Scow Barge (this is the piece of equipment that the clamshell crane will sit on) -- ***$40,000 per month***
4. 3000 ton Dump Scow Barge -- ***$100,000 per month***
5. Another project we are doing a cost estimate on is a proposed lock along the Upper Mississippi River in Illinois. The proposed lock is going to be 1200' long. You mentioned on the phone that you had some rates for river equipment. What would the cost per hour or per day be for a river tug and barge for this type of project? ***Same as above.***
6. Are you familiar with insurance rates? If so, what would be the premium on a job like this be for marine insurance, pollution liability insurance, etc.? ***It all depends on what the risks are, i.e. high current, rough water, lots of traffic. I would only know the rate after my insurance carrier had a chance to review the contract, location, owner, etc.***

Thank you for your help,

Nathan Schreiner | Civil Engineer, Surface Water Group
Main: 949-250-6788 | Fax: 949-608-5870
nathan.schreiner@tetratech.com | www.ttsurfacewater.com

Tetra Tech | Complex World, Clear Solutions
17770 Cartwright Rd, Ste. 500 | Irvine, CA 92614

TETRA TECH, INC.

PHONE LOG

CLIENT:	The United States Army Corps of Engineers, Alaska District
JOB TITLE:	City of Valdez Small Boat Harbor Cost Estimate
PROJECT NO.:	T22303
SUBJECT:	City of Valdez Small Boat Harbor Cost Estimate
CONVERSATION DATE:	May 5, 2008
PREPARED BY:	Nathan Schreiner
CONVERSATIONALISTS:	Rob Swenson of Kiewit (General Construction Company) and Nathan Schreiner of Tetra Tech, Inc.

This phone log summarizes the items discussed or issues resolved during the phone conversation to the best of the writer's ability.

- Rob's contact number is (360) 394-1407.
- Rob is working for a subdivision of Kiewit called General Construction Company.
- The price of a dredge barge with crane, bucket, operator and oiler is $550 per hour. If the barge was to operate two 12 hour shifts the price would decrease to $500 per hour.
- A 1500 cu. yd. dump scow barge would cost $45,000 per month. This price is not influenced by overtime.
- Rob was not familiar with insurance rates as General Construction has their insurance handled by an outside firm. He mentioned that Willis is the company that General Construction uses. He recommended we speak with them. Rob does not have price rates for tugs as they don't own any and have to rent them on an as need basis.

TETRA TECH, INC.

PHONE LOG

CLIENT:	The United States Army Corps of Engineers, Alaska District
JOB TITLE:	City of Valdez Small Boat Harbor Cost Estimate
PROJECT NO.:	T22303
SUBJECT:	City of Valdez Small Boat Harbor Cost Estimate
CONVERSATION DATE:	May 5, 2008
PREPARED BY:	Nathan Schreiner
CONVERSATIONALISTS:	Leonard Juhnke of Manson Construction and Nathan Schreiner of Tetra Tech.

This phone log summarizes the items discussed or issues resolved during the phone conversation to the best of the writer's ability.

- Leonard Juhnke of Manson Construction in Seattle (206) 762-0850 was spoken to and answered the following questions:

1. What is the price rate for a 500 HP Tug? ***Ans. $5000/day manned plus fuel.***
2. What is the price rate for a 1000 HP Tug? ***Ans. $7000/day manned plus fuel.***
3. What is the price rate for a 2000 HP Tug? ***Ans. $7000/day manned plus fuel. The fuel consumption for a 2000 H.P. tug is approximately 2000 gallon per day.***
4. What size of tug is needed for this project? ***Ans. A 2000 to 3000 H.P. tug is needed to haul the barge 35 miles away through Prince William Sound where the water can get rough.***
5. What is the crew makeup and pay to operate the tug? ***Ans. The crew is 2 men per shift and 4 men per 24 hours. This consists of an oiler and operator. The crew costs $60 per hour straight time and $90 per hour for overtime.***
6. What is the price rate for a 400 ton Dump Scow Barge (this is the piece of equipment that the clamshell crane will sit on)? ***Ans. A crane would sink this size barge. A 1500 to 1600 ton barge will more likely be used and will cost $30,000 per month for just the barge without the crane.***
7. What is the price rate for a dredge barge with crane and bucket? ***Ans. A 1500 to 1600 ton barge with crane and bucket will cost $12,000 per day not manned plus fuel. This type of barge uses a three man crew that costs $60 per hour straight time and $90 per hour overtime.***
8. What is the price rate for a 3000 ton Dump Scow Barge? ***Ans. This size barge is too small for the production rate of 300 to 500 cubic yards per hour with a total volume to dredge of 244,000 cubic yards.***
9. What size barge is needed for this project? ***Ans. A 4000 cubic yard barge is what is needed. At your production rate it will take 8 hours to fill the barge. Then to haul the barge 70 miles away roundtrip to Two Moon Bay at 5 knots it will take 14 hours. This barge cost $80,000 per month plus fuel. You will need two barges.***
10. What would the cost per hour or per day be for a river tug and barge for this type of project? ***Ans. The same as the above rates for the ocean going tugs and barges.***
11. Are you familiar with insurance rates? If so, what would be the premium on a job like this be for marine insurance, pollution liability insurance, etc.? ***Ans. 1.5% to 2% of the total bid cost.***

TETRA TECH, INC.

PHONE LOG

CLIENT:	The United States Army Corps of Engineers, Alaska District
JOB TITLE:	City of Valdez Small Boat Harbor Cost Estimate
PROJECT NO.:	T22303
SUBJECT:	City of Valdez Small Boat Harbor Cost Estimate
CONVERSATION DATE:	May 7, 2010
PREPARED BY:	Scott Vose
CONVERSATIONALISTS:	John O. of PND Engineers and Scott Vose of Tetra Tech

This phone log summarizes the items discussed or issues resolved during the phone conversation to the best of the writer's ability.

- John O. of PND Engineeris in Seattle (206) 624-1387 was spoken to and provided the following information:

1. The price per square foot for timber floating docks is approximately $80.00.

TETRA TECH, INC.

PHONE LOG

CLIENT:	The United States Army Corps of Engineers, Alaska District
JOB TITLE:	City of Valdez Small Boat Harbor Cost Estimate
PROJECT NO.:	T22303
SUBJECT:	City of Valdez Small Boat Harbor Cost Estimate
CONVERSATION DATE:	May 7, 2010
PREPARED BY:	Scott Vose
CONVERSATIONALISTS:	Jeff of Alaska Marine Lines and Scott Vose of Tetra Tech

This phone log summarizes the items discussed or issues resolved during the phone conversation to the best of the writer's ability.

- Jeff from Alaska Marine Lines (800) 326-8346 was spoken to and provided the following information:

1. The price of shipping two 40 foot long sections of timber floats stacked on top of each other, and weighing approximately 50-lbs/sf, is $11,554.

2. This amounts to approximately $12 per square foot for shipping.

APPENDIX G
MCACES Construction Cost Estimate
(GNF Plan)

Valdez Small Boat Harbor
GENERAL NAVIGATION FACILITIES

This estimate includes the Federal and Authorized Non-Federal project costs which are the General Navigation Facilities (GNF) construction features only.

Estimated by	U.S. Army Corps of Engineers, Alaska District
Designed by	U.S. Army Corps of Engineers, Alaska District
Prepared by	Tetra Tech
Preparation Date	8/12/2010
Effective Date of Pricing	8/12/2010
Estimated Construction Time	545 Days

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1000 Breakwaters & Seawalls	1
1000 01 Stub Breakwater	1
1000 02 South Main Breakwater	1
1000 03 East Main Breakwater	1
1000 04 Navigation Aid Foundation	1
12 Navigation Ports & Harbors	1
1202 Harbors	1
1202 01 Dredging and Disposal	1
1202 02 Hydro Surveys (Harbor Improvements)	1
1202 03 Hydro Surveys (Disposal Site)	1
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1600 Bank Stabilization	1
1600 01 North Harbor Slope Protection	1
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1000 03 East Main Breakwater	3
1000 04 Navigation Aid Foundation	3
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1202 Harbors	3
1202 01 Dredging and Disposal	3
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Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

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Designed by
U.S. Army Corps of Engineers, Alaska District
Estimated by
U.S. Army Corps of Engineers, Alaska District
Prepared by
Tetra Tech

Design Document	Navigation Improvements Valdez, Alaska
Document Date	11/1/2007
District	Alaska
Contact	Bruce Sexauer
Budget Year	2011
UOM System	Original

Direct Costs
LaborCost
EQCost
MatlCost
SubBidCost
Travel/PerDiem
Shipping
Fees

Timeline/Currency

Preparation Date	8/12/2010
Escalation Date	8/12/2010
Eff. Pricing Date	8/12/2010
Estimated Duration	545 Day(s)
Currency	US dollars
Exchange Rate	1.000000

Costbook CB06MT: MII Metric Cost Book 2006

Labor LNS2009: Labor National - Seattle 2009

acon & Service (FOOH) Labor Rates!!!!! Fringes paid to the laborers are taxable. In a non-union job the whole fringes are taxable. In union job, the vacation pay fringes is taxabl

Labor Rates
LaborCost1
LaborCost2
LaborCost3
LaborCost4

Equipment EP07R09: MII Equipment Region 9r 2007

09 ALASKA

Sales Tax	0.00
Working Hours per Year	1,040
Labor Adjustment Factor	1.21
Cost of Money	5.25
Cost of Money Discount	25.00
Tire Recap Cost Factor	1.50
Tire Recap Wear Factor	1.80
Tire Repair Factor	0.15
Equipment Cost Factor	1.10
Standby Depreciation Factor	0.50

Fuel

Electricity	0.148
Gas	3.960
Diesel Off-Road	3.740
Diesel On-Road	4.080

Shipping Rates

Over 0 CWT	37.93
Over 240 CWT	37.12
Over 300 CWT	33.03
Over 400 CWT	29.12
Over 500 CWT	20.50
Over 700 CWT	18.63
Over 800 CWT	15.34

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Direct Cost Markups

Category

Method

Productivity

Productivity

Productivity

Overtime

Overtime

Overtime

	Days/Week	*Hours/Shift*	*Shifts/Day*	*1st Shift*	*2nd Shift*	*3rd Shift*
Standard	*5.00*	*8.00*	*1.00*	*8.00*	*0.00*	*0.00*
Actual	*6.00*	*8.00*	*1.00*	*10.00*	*0.00*	*0.00*

Day	*OT Factor*	*Working*	*OT Percent*	*FCCM Percent*
Monday	*1.50*	*Yes*	*16.67*	*(33.33)*
Tuesday	*1.50*	*Yes*		
Wednesday	*1.50*	*Yes*		
Thursday	*1.50*	*Yes*		
Friday	*1.50*	*Yes*		
Saturday	*1.50*	*Yes*		
Sunday	*2.00*	*No*		

Overtime Dredge

Overtime

Overtime

	Days/Week	*Hours/Shift*	*Shifts/Day*	*1st Shift*	*2nd Shift*	*3rd Shift*
Standard	*5.00*	*8.00*	*2.00*	*8.00*	*8.00*	*0.00*
Actual	*6.00*	*8.00*	*2.00*	*10.00*	*10.00*	*0.00*

Day	*OT Factor*	*Working*	*OT Percent*	*FCCM Percent*
Monday	*1.50*	*Yes*	*16.67*	*(66.67)*
Tuesday	*1.50*	*Yes*		
Wednesday	*1.50*	*Yes*		
Thursday	*1.50*	*Yes*		
Friday	*1.50*	*Yes*		
Saturday	*1.50*	*Yes*		
Sunday	*2.00*	*No*		

Overtime Breakwater

Overtime

Overtime

	Days/Week	*Hours/Shift*	*Shifts/Day*	*1st Shift*	*2nd Shift*	*3rd Shift*
Standard	*5.00*	*8.00*	*1.00*	*8.00*	*0.00*	*0.00*
Actual	*6.00*	*8.00*	*1.00*	*10.00*	*0.00*	*0.00*

Day	*OT Factor*	*Working*	*OT Percent*	*FCCM Percent*
Monday	*1.50*	*Yes*	*16.67*	*(33.33)*
Tuesday	*1.50*	*Yes*		
Wednesday	*1.50*	*Yes*		
Thursday	*1.50*	*Yes*		
Friday	*1.50*	*Yes*		
Saturday	*1.50*	*Yes*		
Sunday	*2.00*	*No*		

Sales Tax

TaxAdj

Running % on Selected Costs

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

MatlCost

Contractor Markups	Category	Method
JOOH (Small Tools)	JOOH	% of Labor
JOOH	JOOH	JOOH (Calculated)
HOOH	HOOH	Running %
Profit	Profit	Profit Weighted Guidelines

Guideline	*Value*	*Weight*	*Percentage*
Risk	*0.100*	*20*	*2.00*
Difficulty	*0.100*	*15*	*1.50*
Size	*0.030*	*15*	*0.45*
Period	*0.120*	*15*	*1.80*
Invest (Contractor's)	*0.100*	*5*	*0.50*
Assist (Assistance by)	*0.070*	*5*	*0.35*
SubContracting	*0.092*	*25*	*2.30*
Total		*100*	*8.90*

JOOH Sub	JOOH	Running %
HOOH Sub	HOOH	Running %
Profit Sub	Profit	Direct %
Bond	Bond	Bond Table

Class B, Tiered, 24 months, 1.00% Surcharge

Contract Price	*Bond Rate*
500,000	*15.84*
2,000,000	*9.57*
2,500,000	*7.59*
2,500,000	*6.93*
100,000,000,000	*6.34*

Excise Tax	Excise	Running %

Currency in US dollars

Description	Quantity	UOM	ContractCost	ProjectCost	C/O
Project Cost Summary Report			**18,889,779**	**18,889,779**	
10 Breakwaters and Seawalls	**1.00**	**LS**	**14,099,259**	**14,099,259**	
1000 Breakwaters & Seawalls	**1.00**	**LS**	**14,099,259**	**14,099,259**	
1000 01 Stub Breakwater	**1.00**	**LS**	**264,406**	**264,406**	
1000 02 South Main Breakwater	**1.00**	**LS**	**8,624,809**	**8,624,809**	
1000 03 East Main Breakwater	**1.00**	**LS**	**5,202,711**	**5,202,711**	
1000 04 Navigation Aid Foundation	**1.00**	**LS**	**7,333**	**7,333**	
12 Navigation Ports & Harbors	**1.00**	**LS**	**2,389,232**	**2,389,232**	
1202 Harbors	**1.00**	**LS**	**2,389,232**	**2,389,232**	
1202 01 Dredging and Disposal	**1.00**	**LS**	**2,287,504**	**2,287,504**	
			983,571.97	*983,571.97*	
1202 01 00 Dredging	**1.00**	**EA**	**983,572**	**983,572**	
			956,132.56	*956,132.56*	
1202 01 01 Disposal Two Moon Bay	**1.00**	**EA**	**956,133**	**956,133**	
			347,799.06	*347,799.06*	
1202 01 05 Disposal Fast Land	**1.00**	**EA**	**347,799**	**347,799**	
1202 02 Hydro Surveys (Harbor Improvements)	**1.00**	**LS**	**63,510**	**63,510**	
1202 03 Hydro Surveys (Disposal Site)	**1.00**	**LS**	**38,218**	**38,218**	
			38,218.22	*38,218.22*	
1202 03 01 Hydro Surveys Disposal Alternative 1	**1.00**	**EA**	**38,218**	**38,218**	
16 Bank Stabilization	**1.00**	**LS**	**1,153,288**	**1,153,288**	
1600 Bank Stabilization	**1.00**	**LS**	**1,153,288**	**1,153,288**	
1600 01 North Harbor Slope Protection	**1.00**	**LS**	**465,954**	**465,954**	
1600 03 Basin Slope Protection	**1.00**	**LS**	**687,334**	**687,334**	
			546,000.00	*546,000.00*	
30 Planning, Engineering and Design	**1.00**	**EA**	**546,000**	**546,000**	
			546,000.00	*546,000.00*	

Currency in US dollars

Description	Quantity	UOM	ContractCost	ProjectCost	C/O
3001 Planning, Engineering and Design	**1.00**	**EA**	**546,000**	**546,000**	
			702,000.00	*702,000.00*	
31 Construction Management	**1.00**	**EA**	**702,000**	**702,000**	
			702,000.00	*702,000.00*	
3101 Construction Management	**1.00**	**EA**	**702,000**	**702,000**	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	Contractor	DirectCost	SubCMU	CostToPrime	PrimeCMU	ContractCost	C/O
Contract Cost Summary Report				**11,536,685**	**14,767**	**10,303,452**	**7,338,327**	**18,889,779**	
10 Breakwaters and Seawalls	**1.00**	**LS**	**Prime Dredging Contractor**	**8,234,489**	**0**	**8,234,489**	**5,864,770**	**14,099,259**	
1000 Breakwaters & Seawalls	**1.00**	**LS**	**Prime Dredging Contractor**	**8,234,489**	**0**	**8,234,489**	**5,864,770**	**14,099,259**	
1000 01 Stub Breakwater	**1.00**	**LS**	**Prime Dredging Contractor**	**154,423**	**0**	**154,423**	**109,983**	**264,406**	
1000 02 South Main Breakwater	**1.00**	**LS**	**Prime Dredging Contractor**	**5,037,208**	**0**	**5,037,208**	**3,587,601**	**8,624,809**	
1000 03 East Main Breakwater	**1.00**	**LS**	**Prime Dredging Contractor**	**3,038,576**	**0**	**3,038,576**	**2,164,135**	**5,202,711**	
1000 04 Navigation Aid Foundation	**1.00**	**LS**	**Prime Dredging Contractor**	**4,283**	**0**	**4,283**	**3,050**	**7,333**	
12 Navigation Ports & Harbors	**1.00**	**LS**	**Prime Dredging Contractor**	**1,380,633**	**14,767**	**1,395,400**	**993,832**	**2,389,232**	
1202 Harbors	**1.00**	**LS**	**Prime Dredging Contractor**	**1,380,633**	**14,767**	**1,395,400**	**993,832**	**2,389,232**	
1202 01 Dredging and Disposal	**1.00**	**LS**	**Prime Dredging Contractor**	**1,335,987**	**0**	**1,335,987**	**951,517**	**2,287,504**	
1202 02 Hydro Surveys (Harbor Improvements)	**1.00**	**LS**	**Surveyor Subcontractor**	**27,873**	**9,219**	**37,092**	**26,418**	**63,510**	
1202 03 Hydro Surveys (Disposal Site)	**1.00**	**LS**	**Surveyor Subcontractor**	**16,773**	**5,548**	**22,321**	**15,897**	**38,218**	
16 Bank Stabilization	**1.00**	**LS**	**Prime Dredging Contractor**	**673,563**	**0**	**673,563**	**479,725**	**1,153,288**	
1600 Bank Stabilization	**1.00**	**LS**	**Prime Dredging Contractor**	**673,563**	**0**	**673,563**	**479,725**	**1,153,288**	
1600 01 North Harbor Slope Protection	**1.00**	**LS**	**Prime Dredging Contractor**	**272,134**	**0**	**272,134**	**193,819**	**465,954**	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	Contractor	DirectCost	SubCMU	CostToPrime	PrimeCMU	ContractCost	C/O
1600 03 Basin Slope Protection	**1.00**	**LS**	**Prime Dredging Contractor**	**401,429**	**0**	**401,429**	**285,906**	**687,334**	
				546,000.00		*0.00*		*546,000.00*	
30 Planning, Engineering and Design	**1.00**	**EA**		**546,000**	**0**	**0**	**0**	**546,000**	
				546,000.00		*0.00*		*546,000.00*	
3001 Planning, Engineering and Design	**1.00**	**EA**		**546,000**	**0**	**0**	**0**	**546,000**	
				702,000.00		*0.00*		*702,000.00*	
31 Construction Management	**1.00**	**EA**		**702,000**	**0**	**0**	**0**	**702,000**	
				702,000.00		*0.00*		*702,000.00*	
3101 Construction Management	**1.00**	**EA**		**702,000**	**0**	**0**	**0**	**702,000**	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
Project Direct Costs Report				**2,182,461**	**3,209,169**	**4,856,355**	**1,288,700**	**0**	**11,536,685**	
10 Breakwaters and Seawalls	**1.00**	**LS**	**Prime Dredging Contractor**	**1,470,542**	**2,296,101**	**4,467,846**	**0**	**0**	**8,234,489**	
1000 Breakwaters & Seawalls	**1.00**	**LS**	**Prime Dredging Contractor**	**1,470,542**	**2,296,101**	**4,467,846**	**0**	**0**	**8,234,489**	

(Note: Three breakwaters will be constructed to protect the harbor. The south main breakwater will be approximately 473 m long. The east main breakwater will be approximately 240 m long. And just to the west of the south main breakwater will be a 29 m long stub breakwater. Breakwater construction productivity is based on data given by Manson Construction (206-762-0850) for placing Armor Rock at a production rate of 100ton/hr which is equivalent to 48cu m/hr assuming 1.6ton/cy. The production rates for the secondary rock and core rock were adjusted up to 67cu m/hr and 109cu m/hr respectively based on bucket void ratio and ease of placement. Assume breakwater construction will progress with one 12 hour shift per day, 6 days a week for overtime calculation. Equipment costs for the dredge barge were increased by a factor of 10 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)

1000 01 Stub Breakwater	**1.00**	**LS**	**Prime Dredging Contractor**	**27,093**	**42,379**	**84,950**	**0**	**0**	**154,423**	

(Note: The stub breakwater will be approximately 29 m long and include approximately 230 cu m of Core Rock, 520 cu m of Secondary Rock, and 650 cu m of Armor Rock. The rock will be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.)

				9.21	*14.40*	*26.00*	*0.00*		*49.61*	
USR Core Rock Place core rock (2.2kg - 91kg) with 3.8 cubic meter (cu m) clamshell bucket	276.00	LM3	Prime Dredging Contractor	2,541	3,974	7,176	0	0	13,691	

(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez, Alaska (907-835-4756) $26.00/cu m delivered to project site; Quantity: 230cu m x 20% for overplace and loss = 276cu m; Productivity: Based on crew output rate for core rock placement.)

				14.98	*23.43*	*52.34*	*0.00*		*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	598.00	LM3	Prime Dredging Contractor	8,956	14,009	31,299	0	0	54,264	

(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 520cu m x 15% for overplace and loss = 598cu m; Productivity: Based on crew output rate for secondary rock placement.)

				21.81	*34.12*	*65.00*	*0.00*		*120.93*	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
USR Armor Rock Place armor rock (1016kg - 1690kg) with 3.8 cubic meter (cu m) clamshell bucket	715.00	LM3	Prime Dredging Contractor	15,597	24,396	46,475	0	0	86,468	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $65.00/cu m delivered to project site; Quantity: 650cu m x 10% for overplace and loss = 715cu m; Productivity: Based on crew output rate for armor rock placement.)										
1000 02 South Main Breakwater	**1.00**	**LS**	**Prime Dredging Contractor**	**900,311**	**1,408,254**	**2,728,643**	**0**	**0**	**5,037,208**	
(Note: The south main breakwater will be approximately 473 m long and include approximately 25,750 cu m of Core Rock, 10,160 cu m of Secondary Rock, and 18,370 cu m of Armor Rock. The rock will be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.)										
				9.21	*14.40*	*26.00*	*0.00*		*49.61*	
USR Core Rock Place core rock (2.2kg - 91kg) with 3.8 cubic meter (cu m) clamshell bucket	30,900.00	LM3	Prime Dredging Contractor	284,457	444,944	803,400	0	0	1,532,802	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez, Alaska (907-835-4756) $26.00/cu m delivered to project site; Quantity: 25,750cu m x 20% for overplace and loss = 30,900cu m; Based on crew output rate for core rock placement.)										
				14.98	*23.43*	*52.34*	*0.00*		*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	11,685.00	LM3	Prime Dredging Contractor	175,000	273,733	611,593	0	0	1,060,327	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 10,160cu m x 15% for overplace and loss = 11,685cu m; Productivity: Based on crew output rate for secondary rock placement.)										
				21.81	*34.12*	*65.00*	*0.00*		*120.93*	
USR Armor Rock Place armor rock (1016kg - 1690kg) with 3.8 cubic meter (cu m) clamshell bucket	20,210.00	LM3	Prime Dredging Contractor	440,853	689,576	1,313,650	0	0	2,444,079	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $65.00/cu m delivered to project site; Quantity: 18,370cu m x 10% for overplace and loss = 20,210cu m; Productivity: Based on crew output rate for armor rock placement.)										
1000 03 East Main Breakwater	**1.00**	**LS**	**Prime Dredging Contractor**	**540,509**	**845,456**	**1,652,611**	**0**	**0**	**3,038,576**	

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
(Note: The east main breakwater will be approximately 240 m long and include approximately 11,590 cu m of Core Rock, 6,980 cu m of Secondary Rock, and 12,180 cu m of Armor Rock. The rock will be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.)										
				9.21	*14.40*	*26.00*	*0.00*		*49.61*	
USR Core Rock Place core rock (2.2kg - 91kg) with 3.8 cubic meter (cu m) clamshell bucket	13,908.00	LM3	Prime Dredging Contractor	128,033	200,268	361,608	0	0	689,910	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez, Alaska (907-835-4756) $26.00/cu m delivered to project site; Quantity: 11,590cu m x 20% for overplace and loss = 13,908cu m; Based on crew output rate for core rock placement.)										
				14.98	*23.43*	*52.34*	*0.00*		*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	8,027.00	LM3	Prime Dredging Contractor	120,216	188,041	420,133	0	0	728,390	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 6,980cu m x 15% for overplace and loss = 8,027cu m; Productivity: Based on crew output rate for secondary rock placement.)										
				21.81	*34.12*	*65.00*	*0.00*		*120.93*	
USR Armor Rock Place armor rock (1016kg - 1690kg) with 3.8 cubic meter (cu m) clamshell bucket	13,398.00	LM3	Prime Dredging Contractor	292,259	457,147	870,870	0	0	1,620,276	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $65.00/cu m delivered to project site; Quantity: 12,180cu m x 10% for overplace and loss = 13,398cu m; Productivity: Based on crew output rate for armor rock placement.)										
1000 04 Navigation Aid Foundation	**1.00**	**LS**	**Prime Dredging Contractor**	**2,629**	**12**	**1,642**	**0**	**0**	**4,283**	
(Note: Two navigation aid foundations will be constructed on top of the breakwaters near the entrance channel. The foundations will each be 2m x 2m x 0.6m in dimension. The Coast Guard will provide the navigation markers and attachment hardware seperately.)										
				365.20	*1.63*	*228.00*	*0.00*		*594.84*	
RSM 033102403800 Structural concrete, in place, spread footing, includes forms(4 uses), reinforcing steel, and finishing	7.20	M3	Prime Dredging Contractor	2,629	12	1,642	0	0	4,283	
(Note: Quantity: (2) 2m x 2m x 0.6m x 50% for overplace and loss = 7.2cu m)										

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
12 Navigation Ports & Harbors	**1.00**	**LS**	**Prime Dredging Contractor**	**600,752**	**739,182**	**0**	**40,700**	**0**	**1,380,633**	
1202 Harbors	**1.00**	**LS**	**Prime Dredging Contractor**	**600,752**	**739,182**	**0**	**40,700**	**0**	**1,380,633**	
(Note: The harbor basin would be approximately 435 m by 130 m and dredged to MLLW depths varying from -5.5 m at the entrance to -4 m in the center and to -2.7 m at the west end as the length and draft of the vessels dictate.)										
1202 01 Dredging and Disposal	**1.00**	**LS**	**Prime Dredging Contractor**	**598,147**	**737,840**	**0**	**0**	**0**	**1,335,987**	
(Note: A total of approximately 186,410 cubic meters of dredging would be required for the entrance channel, maneuvering channel and basin. The dredged material will be used to create fast land and the remainder disposed of at Two Moon Bay, Alaska, which is approximately 48km from the project site (96km round trip).)										
				281,275.14	*293,167.31*	*0.00*	*0.00*		*574,442.45*	
1202 01 00 Dredging	**1.00**	**EA**	**Prime Dredging Contractor**	**281,275**	**293,167**	**0**	**0**	**0**	**574,442**	
(Note: The GNF costs for this item are approximately 37% of the total.)										
				3.96	*4.13*	*0.00*	*0.00*		*8.09*	
USR Dredge Dredging, barge mounted 7.6 cubic meter (cm) clamshell bucket excavation into dump scow barge	71,040.00	BM3	Prime Dredging Contractor	281,275	293,167	0	0	0	574,442	
(Note: Quantity: 186,410cu m x 3% overdredge = 192,000cu m; Productivity is based on data given by Manson Construction (206-762-0850) for dredging at a production rate of 5400cy/24hr which is equivalent to 172cu m/hr, this rate was adjusted based on using a 7.6cu m bucket to 186cu m/hr. Productivity: Based on crew output rate for harbor dredging. - Assume dredging will progress with two 10 hour shifts per day, 6 days a week for overtime calculation; Cost: Equipment costs for the dredge barge were increased by a factor of 10 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)										
				202,543.22	*355,873.60*	*0.00*	*0.00*		*558,416.82*	
1202 01 01 Disposal Two Moon Bay	**1.00**	**EA**	**Prime Dredging Contractor**	**202,543**	**355,874**	**0**	**0**	**0**	**558,417**	
(Note: The GNF costs for this item are approximately 37% of the total.)										

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
				3.81	*6.69*	*0.00*	*0.00*		*10.51*	
USR Dump Scow - Two Moon Bay Dump Scow Barges & Tug	53,155.68	LM3	Prime Dredging Contractor	202,543	355,874	0	0	0	558,417	
(Note: Quantity: 119,720cu m x 20% swell factor = 143,664cu m; Productivity: 2 dump scows x 1150cu m / [(96km / 5knots) + 2hrs] = 186cu m/hr; Cost: Equipment costs for the dump scow barge and tug were increased by a factor of 2 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)										
				114,328.20	*88,799.33*	*0.00*	*0.00*		*203,127.53*	
1202 01 05 Disposal Fast Land	**1.00**	**EA**	**Prime Dredging Contractor**	**114,328**	**88,799**	**0**	**0**	**0**	**203,128**	
(Note: The GNF costs for this item are approximately 37% of the total.)										
				0.65	*1.14*	*0.00*	*0.00*		*1.79*	
USR Dump Scow - Fast Land Dump Scow Barges & Tug	32,092.32	LM3	Prime Dredging Contractor	20,867	36,663	0	0	0	57,530	
(Note: Quantity: (41,610cu m + 30,670cu m) x 20% swell factor = 86,736cu m; Productivity: 2 dump scows x 1150cu m / [(0.5km / 5knots) + 1hrs] = 1090cu m/hr; Cost: Equipment costs for the dump scow barge and tug were increased by a factor of 2 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)										
				2.91	*1.62*	*0.00*	*0.00*		*4.54*	
USR Fast Land Fast Land Off Loading	32,092.32	LM3	Prime Dredging Contractor	93,461	52,136	0	0	0	145,597	
(Note: Quantity: 72,280cu m x 20% swell factor = 86,736cu m; Assumes dredged material would be placed into skip buckets on the dump scow and transported to the fast land site to be off loaded by crane.)										
1202 02 Hydro Surveys (Harbor Improvements)	**1.00**	**LS**	**Surveyor Subcontractor**	**1,302**	**671**	**0**	**25,900**	**0**	**27,873**	
(Note: The GNF costs for this item are approximately 37% of the total.)										
				0.00	*0.00*	*0.00*	*35,000.00*		*35,000.00*	
USR Survey Mapping Survey Mapping	0.74	EA	Surveyor Subcontractor	0	0	0	25,900	0	25,900	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the hydro survey mapping can be processed for approximately $35,000 each time.)										
				1,760.12	*906.27*	*0.00*	*0.00*		*2,666.40*	
USR Hydro Surveys Hydro Surveying, 3 person crew with boat	0.74	DAY	Surveyor Subcontractor	1,302	671	0	0	0	1,973	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the boat crew can obtain the data in 1 day. Since 2 surveys are required the total quantity is 2 days.)										

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
1202 03 Hydro Surveys (Disposal Site)	**1.00**	**LS**	**Surveyor Subcontractor**	**1,302**	**671**	**0**	**14,800**	**0**	**16,773**	
(Note: The GNF costs for this item are approximately 37% of the total.)										
				1,302.49	*670.64*	*0.00*	*14,800.00*		*16,773.13*	
1202 03 01 Hydro Surveys Disposal Alternative 1	**1.00**	**EA**	**Surveyor Subcontractor**	**1,302**	**671**	**0**	**14,800**	**0**	**16,773**	
				0.00	*0.00*	*0.00*	*20,000.00*		*20,000.00*	
USR Survey Mapping Survey Mapping	0.74	EA	Surveyor Subcontractor	0	0	0	14,800	0	14,800	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the hydro survey mapping can be processed for approximately $20,000 each time.)										
				1,760.12	*906.27*	*0.00*	*0.00*		*2,666.40*	
USR Hydro Surveys Hydro Surveying, 3 person crew with boat	0.74	DAY	Surveyor Subcontractor	1,302	671	0	0	0	1,973	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the boat crew can obtain the data in 1 day. Since 2 surveys are required the total quantity is 2 days.)										
16 Bank Stabilization	**1.00**	**LS**	**Prime Dredging Contractor**	**111,167**	**173,887**	**388,509**	**0**	**0**	**673,563**	
1600 Bank Stabilization	**1.00**	**LS**	**Prime Dredging Contractor**	**111,167**	**173,887**	**388,509**	**0**	**0**	**673,563**	
1600 01 North Harbor Slope Protection	**1.00**	**LS**	**Prime Dredging Contractor**	**44,914**	**70,254**	**156,966**	**0**	**0**	**272,134**	
(Note: The GNF costs for this item are approximately 59% of the total.)										
				14.98	*23.43*	*52.34*	*0.00*		*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	2,998.97	LM3	Prime Dredging Contractor	44,914	70,254	156,966	0	0	272,134	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 4,420cu m x 15% for overplace and loss = 5,083cu m; Productivity: Based on crew output rate for secondary rock placement.)										

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
1600 03 Basin Slope Protection	**1.00**	**LS**	**Prime Dredging Contractor**	**66,253**	**103,633**	**231,543**	**0**	**0**	**401,429**	
(Note: The GNF costs for this item are approximately 59% of the total.)										
				14.98	*23.43*	*52.34*	*0.00*		*90.74*	
USR Basin Slope Protection Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	4,423.82	LM3	Prime Dredging Contractor	66,253	103,633	231,543	0	0	401,429	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 6,520cu m x 15% for overplace and loss = 7,498cu m; Productivity: Based on crew output rate for secondary rock placement.)										
				0.00	*0.00*	*0.00*	*546,000.00*		*546,000.00*	
30 Planning, Engineering and Design	**1.00**	**EA**		**0**	**0**	**0**	**546,000**	**0**	**546,000**	
				0.00	*0.00*	*0.00*	*546,000.00*		*546,000.00*	
3001 Planning, Engineering and Design	**1.00**	**EA**		**0**	**0**	**0**	**546,000**	**0**	**546,000**	
USR Planning, Engineering and Design	1.00	LS		0	0	0	546,000	0	546,000	
(Note: Planning, Engineering and Design: This account covers Project Management, Planning and Environmental Compliance, Engineering and Design, Engineering Technical Review & VE, Contracting & Reprographics necessary to prepare the GNF project for construction. The geotechnical borings have already been performed. The cost is commensurate with other Alaska District projects this size and was provided by Bruce Sexauer, Project Formulation Section, (907) 753-5619.)										
				0.00	*0.00*	*0.00*	*702,000.00*		*702,000.00*	
31 Construction Management	**1.00**	**EA**		**0**	**0**	**0**	**702,000**	**0**	**702,000**	
				0.00	*0.00*	*0.00*	*702,000.00*		*702,000.00*	
3101 Construction Management	**1.00**	**EA**		**0**	**0**	**0**	**702,000**	**0**	**702,000**	
USR Construction Management	1.00	LS		0	0	0	702,000	0	702,000	
(Note: Construction Management: This account covers Construction Management, Project Management, and Engineering During Construction. Costs. Costs for this account were approximated to be $50,000 per month for the GNF items from time of award till end of construction. Information was provided by Bruce Sexauer, Project Formulation Section, (907) 753 -5619.)										

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
Project Bare to Direct Report			**9,639,912**	**1,497,796**	**105,409**	**0**	**0**	**211,450**	**82,117**	**11,536,685**	
10 Breakwaters and Seawalls	**1.00**	**LS**	**6,916,237**	**1,049,311**	**71,010**	**0**	**0**	**142,477**	**55,454**	**8,234,489**	
1000 Breakwaters & Seawalls	**1.00**	**LS**	**6,916,237**	**1,049,311**	**71,010**	**0**	**0**	**142,477**	**55,454**	**8,234,489**	
(Note: Three breakwaters will be constructed to protect the harbor. The south main breakwater will be approximately 473 m long. The east main breakwater will be approximately 240 m long. And just to the west of the south main breakwater will be a 29 m long stub breakwater. Breakwater construction productivity is based on data given by Manson Construction (206-762-0850) for placing Armor Rock at a production rate of 100ton/hr which is equivalent to 48cu m/hr assuming 1.6ton/cy. The production rates for the secondary rock and core rock were adjusted up to 67cu m/hr and 109cu m/hr respectively based on bucket void ratio and ease of placement. Assume breakwater construction will progress with one 12 hour shift per day, 6 days a week for overtime calculation. Equipment costs for the dredge barge were increased by a factor of 10 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)											
1000 01 Stub Breakwater	**1.00**	**LS**	**130,114**	**19,356**	**1,307**	**0**	**0**	**2,625**	**1,022**	**154,423**	
(Note: The stub breakwater will be approximately 29 m long and include approximately 230 cu m of Core Rock, 520 cu m of Secondary Rock, and 650 cu m of Armor Rock. The rock will be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.)											
			41.35	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*49.61*	
USR Core Rock Place core rock (2.2kg - 91kg) with 3.8 cubic meter (cu m) clamshell bucket	276.00	LM3	11,411	1,815	123	0	0	246	96	13,691	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez, Alaska (907-835-4756) $26.00/cu m delivered to project site; Quantity: 230cu m x 20% for overplace and loss = 276cu m; Productivity: Based on crew output rate for core rock placement.)											
			77.31	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	598.00	LM3	46,228	6,398	432	0	0	868	338	54,264	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 520cu m x 15% for overplace and loss = 598cu m; Productivity: Based on crew output rate for secondary rock placement.)											
			101.36	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*120.93*	
USR Armor Rock Place armor rock (1016kg - 1690kg) with 3.8 cubic meter (cu m) clamshell bucket	715.00	LM3	72,474	11,142	752	0	0	1,511	588	86,468	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $65.00/cu m delivered to project site; Quantity: 650cu m x 10% for overplace and loss = 715cu m; Productivity: Based on crew output rate for armor rock placement.)											
1000 02 South Main Breakwater	**1.00**	**LS**	**4,229,419**	**643,190**	**43,418**	**0**	**0**	**87,229**	**33,951**	**5,037,208**	

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
(Note: The south main breakwater will be approximately 473 m long and include approximately 25,750 cu m of Core Rock, 10,160 cu m of Secondary Rock, and 18,370 cu m of Armor Rock. The rock will be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.)											
			41.35	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*49.61*	
USR Core Rock Place core rock (2.2kg - 91kg) with 3.8 cubic meter (cu m) clamshell bucket	30,900.00	LM3	1,277,577	203,219	13,718	0	0	27,560	10,727	1,532,802	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez, Alaska (907-835-4756) $26.00/cu m delivered to project site; Quantity: 25,750cu m x 20% for overplace and loss = 30,900cu m; Based on crew output rate for core rock placement.)											
			77.31	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	11,685.00	LM3	903,311	125,022	8,440	0	0	16,955	6,599	1,060,327	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 10,160cu m x 15% for overplace and loss = 11,685cu m; Productivity: Based on crew output rate for secondary rock placement.)											
			101.36	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*120.93*	
USR Armor Rock Place armor rock (1016kg - 1690kg) with 3.8 cubic meter (cu m) clamshell bucket	20,210.00	LM3	2,048,531	314,949	21,261	0	0	42,713	16,625	2,444,079	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $65.00/cu m delivered to project site; Quantity: 18,370cu m x 10% for overplace and loss = 20,210cu m; Productivity: Based on crew output rate for armor rock placement.)											
1000 03 East Main Breakwater	**1.00**	**LS**	**2,553,614**	**386,144**	**26,067**	**0**	**0**	**52,369**	**20,383**	**3,038,576**	
(Note: The east main breakwater will be approximately 240 m long and include approximately 11,590 cu m of Core Rock, 6,980 cu m of Secondary Rock, and 12,180 cu m of Armor Rock. The rock will be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.)											
			41.35	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*49.61*	
USR Core Rock Place core rock (2.2kg - 91kg) with 3.8 cubic meter (cu m) clamshell bucket	13,908.00	LM3	575,034	91,468	6,175	0	0	12,405	4,828	689,910	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez, Alaska (907-835-4756) $26.00/cu m delivered to project site; Quantity: 11,590cu m x 20% for overplace and loss = 13,908cu m; Based on crew output rate for core rock placement.)											
			77.31	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	8,027.00	LM3	620,528	85,884	5,798	0	0	11,647	4,533	728,390	

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 6,980cu m x 15% for overplace and loss = 8,027cu m; Productivity: Based on crew output rate for secondary rock placement.)											
			101.36	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*120.93*	
USR Armor Rock Place armor rock (1016kg - 1690kg) with 3.8 cubic meter (cu m) clamshell bucket	13,398.00	LM3	1,358,052	208,792	14,094	0	0	28,316	11,021	1,620,276	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $65.00/cu m delivered to project site; Quantity: 12,180cu m x 10% for overplace and loss = 13,398cu m; Productivity: Based on crew output rate for armor rock placement.)											
1000 04 Navigation Aid Foundation	**1.00**	**LS**	**3,090**	**621**	**219**	**0**	**0**	**255**	**98**	**4,283**	
(Note: Two navigation aid foundations will be constructed on top of the breakwaters near the entrance channel. The foundations will each be 2m x 2m x 0.6m in dimension. The Coast Guard will provide the navigation markers and attachment hardware seperately.)											
			429.18	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*594.84*	
RSM 033102403800 Structural concrete, in place, spread footing, includes forms(4 uses), reinforcing steel, and finishing	7.20	M3	3,090	621	219	0	0	255	98	4,283	
(Note: Quantity: (2) 2m x 2m x 0.6m x 50% for overplace and loss = 7.2cu m)											
12 Navigation Ports & Harbors	**1.00**	**LS**	**901,855**	**369,066**	**29,038**	**0**	**0**	**58,202**	**22,471**	**1,380,633**	
1202 Harbors	**1.00**	**LS**	**901,855**	**369,066**	**29,038**	**0**	**0**	**58,202**	**22,471**	**1,380,633**	
(Note: The harbor basin would be approximately 435 m by 130 m and dredged to MLLW depths varying from -5.5 m at the entrance to -4 m in the center and to -2.7 m at the west end as the length and draft of the vessels dictate.)											
1202 01 Dredging and Disposal	**1.00**	**LS**	**858,802**	**368,058**	**28,811**	**0**	**0**	**57,952**	**22,365**	**1,335,987**	
(Note: A total of approximately 186,410 cubic meters of dredging would be required for the entrance channel, maneuvering channel and basin. The dredged material will be used to create fast land and the remainder disposed of at Two Moon Bay, Alaska, which is approximately 48km from the project site (96km round trip).)											
			371,289.97	*159,124.27%*	*6,258.66%*					*574,442.45*	
1202 01 00 Dredging	**1.00**	**EA**	**371,290**	**159,124**	**6,259**	**0**	**0**	**27,251**	**10,518**	**574,442**	
(Note: The GNF costs for this item are approximately 37% of the total.)											
			5.23	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*8.09*	
USR Dredge Dredging, barge mounted 7.6 cubic meter (cm) clamshell bucket excavation into dump scow barge	71,040.00	BM3	371,290	159,124	6,259	0	0	27,251	10,518	574,442	

Currency in US dollars

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
(Note: Quantity: 186,410cu m x 3% overdredge = 192,000cu m; Productivity is based on data given by Manson Construction (206-762-0850) for dredging at a production rate of 5400cy/24hr which is equivalent to 172cu m/hr, this rate was adjusted based on using a 7.6cu m bucket to 186cu m/hr. Productivity: Based on crew output rate for harbor dredging. - Assume dredging will progress with two 10 hour shifts per day, 6 days a week for overtime calculation; Cost: Equipment costs for the dredge barge were increased by a factor of 10 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)										
			360,121.16	*154,337.64%*	*16,785.64%*					*558,416.82*	
1202 01 01 Disposal Two Moon Bay	**1.00**	**EA**	**360,121**	**154,338**	**16,786**	**0**	**0**	**19,623**	**7,549**	**558,417**	
(Note: The GNF costs for this item are approximately 37% of the total.)											
			6.77	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*10.51*	
USR Dump Scow - Two Moon Bay Dump Scow Barges & Tug	53,155.68	LM3	360,121	154,338	16,786	0	0	19,623	7,549	558,417	
(Note: Quantity: 119,720cu m x 20% swell factor = 143,664cu m; Productivity: 2 dump scows x 1150cu m / [(96km / 5knots) + 2hrs] = 186cu m/hr; Cost: Equipment costs for the dump scow barge and tug were increased by a factor of 2 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)											
			127,390.71	*54,596.02%*	*5,766.43%*					*203,127.53*	
1202 01 05 Disposal Fast Land	**1.00**	**EA**	**127,391**	**54,596**	**5,766**	**0**	**0**	**11,077**	**4,297**	**203,128**	
(Note: The GNF costs for this item are approximately 37% of the total.)											
			1.16	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*1.79*	
USR Dump Scow - Fast Land Dump Scow Barges & Tug	32,092.32	LM3	37,101	15,900	1,729	0	0	2,022	778	57,530	
(Note: Quantity: (41,610cu m + 30,670cu m) x 20% swell factor = 86,736cu m; Productivity: 2 dump scows x 1150cu m / [(0.5km / 5knots) + 1hrs] = 1090cu m/hr; Cost: Equipment costs for the dump scow barge and tug were increased by a factor of 2 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)											
			2.81	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*4.54*	
USR Fast Land Fast Land Off Loading	32,092.32	LM3	90,290	38,696	4,037	0	0	9,055	3,520	145,597	
(Note: Quantity: 72,280cu m x 20% swell factor = 86,736cu m; Assumes dredged material would be placed into skip buckets on the dump scow and transported to the fast land site to be off loaded by crane.)											
1202 02 Hydro Surveys (Harbor Improvements)	**1.00**	**LS**	**27,077**	**504**	**114**	**0**	**0**	**125**	**53**	**27,873**	
(Note: The GNF costs for this item are approximately 37% of the total.)											
			35,000.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*35,000.00*	
USR Survey Mapping Survey Mapping	0.74	EA	25,900	0	0	0	0	0	0	25,900	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the hydro survey mapping can be processed for approximately $35,000 each time.)											

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
			1,590.02	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*2,666.40*	
USR Hydro Surveys Hydro Surveying, 3 person crew with boat	0.74	DAY	1,177	504	114	0	0	125	53	1,973	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the boat crew can obtain the data in 1 day. Since 2 surveys are required the total quantity is 2 days.)											
1202 03 Hydro Surveys (Disposal Site)	**1.00**	**LS**	**15,977**	**504**	**114**	**0**	**0**	**125**	**53**	**16,773**	
(Note: The GNF costs for this item are approximately 37% of the total.)											
			15,976.61	*504.26%*	*113.62%*					*16,773.13*	
1202 03 01 Hydro Surveys Disposal Alternative 1	**1.00**	**EA**	**15,977**	**504**	**114**	**0**	**0**	**125**	**53**	**16,773**	
			20,000.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20,000.00*	
USR Survey Mapping Survey Mapping	0.74	EA	14,800	0	0	0	0	0	0	14,800	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the hydro survey mapping can be processed for approximately $20,000 each time.)											
			1,590.02	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*2,666.40*	
USR Hydro Surveys Hydro Surveying, 3 person crew with boat	0.74	DAY	1,177	504	114	0	0	125	53	1,973	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the boat crew can obtain the data in 1 day. Since 2 surveys are required the total quantity is 2 days.)											
16 Bank Stabilization	**1.00**	**LS**	**573,820**	**79,419**	**5,361**	**0**	**0**	**10,771**	**4,192**	**673,563**	
1600 Bank Stabilization	**1.00**	**LS**	**573,820**	**79,419**	**5,361**	**0**	**0**	**10,771**	**4,192**	**673,563**	
1600 01 North Harbor Slope Protection	**1.00**	**LS**	**231,836**	**32,087**	**2,166**	**0**	**0**	**4,352**	**1,694**	**272,134**	
(Note: The GNF costs for this item are approximately 59% of the total.)											
			77.31	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	2,998.97	LM3	231,836	32,087	2,166	0	0	4,352	1,694	272,134	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 4,420cu m x 15% for overplace and loss = 5,083cu m; Productivity: Based on crew output rate for secondary rock placement.)											
1600 03 Basin Slope Protection	**1.00**	**LS**	**341,984**	**47,332**	**3,195**	**0**	**0**	**6,419**	**2,498**	**401,429**	
(Note: The GNF costs for this item are approximately 59% of the total.)											
			77.31	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*90.74*	

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
USR Basin Slope Protection Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	4,423.82	LM3	341,984	47,332	3,195	0	0	6,419	2,498	401,429	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 6,520cu m x 15% for overplace and loss = 7,498cu m; Productivity: Based on crew output rate for secondary rock placement.)											
			546,000.00	*0.00%*	*0.00%*					*546,000.00*	
30 Planning, Engineering and Design	**1.00**	**EA**	**546,000**	**0**	**0**	**0**	**0**	**0**	**0**	**546,000**	
			546,000.00	*0.00%*	*0.00%*					*546,000.00*	
3001 Planning, Engineering and Design	**1.00**	**EA**	**546,000**	**0**	**0**	**0**	**0**	**0**	**0**	**546,000**	
USR Planning, Engineering and Design	1.00	LS	546,000	0	0	0	0	0	0	546,000	
(Note: Planning, Engineering and Design: This account covers Project Management, Planning and Environmental Compliance, Engineering and Design, Engineering Technical Review & VE, Contracting & Reprographics necessary to prepare the GNF project for construction. The geotechnical borings have already been performed. The cost is commensurate with other Alaska District projects this size and was provided by Bruce Sexauer, Project Formulation Section, (907) 753-5619.)											
			702,000.00	*0.00%*	*0.00%*					*702,000.00*	
31 Construction Management	**1.00**	**EA**	**702,000**	**0**	**0**	**0**	**0**	**0**	**0**	**702,000**	
			702,000.00	*0.00%*	*0.00%*					*702,000.00*	
3101 Construction Management	**1.00**	**EA**	**702,000**	**0**	**0**	**0**	**0**	**0**	**0**	**702,000**	
USR Construction Management	1.00	LS	702,000	0	0	0	0	0	0	702,000	
(Note: Construction Management: This account covers Construction Management, Project Management, and Engineering During Construction. Costs. Costs for this account were approximated to be $50,000 per month for the GNF items from time of award till end of construction. Information was provided by Bruce Sexauer, Project Formulation Section, (907) 753 -5619.)											

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
Job Office Overhead Direct Cost Report									
Prime Dredging Contractor									
			1,577,577.39	*1,332,567.53*	*89,960.50*	*72,000.00*		*4,317,905.42*	
OVERHEAD ITEMS	**1.00**	**EA**	**1,577,577**	**1,332,568**	**89,961**	**72,000**	**1,245,800**	**4,317,905**	
			0.00	*40,217.51*	*0.00*	*0.00*		*40,217.51*	
USR ST Small Tools	1.00	EA	0	40,218	0	0	0	40,218	
			169,366.85	*1,106,888.23*	*0.00*	*72,000.00*		*1,348,255.08*	
MOBILIZATION/DEMOBILIZATION	**1.00**	**EA**	**169,367**	**1,106,888**	**0**	**72,000**	**0**	**1,348,255**	
Mobilization	**1.00**	**LS**	**84,683**	**553,444**	**0**	**64,000**	**0**	**702,128**	
			27.29	*186.42*	*0.00*	*0.00*		*213.71*	
USR SEA Mob/Demob SEA Mobilization/Demobilization	2,365.00	KM	64,539	440,890	0	0	0	505,429	
(Note: The Contractor will mob/demob the barge equipment from the Seattle area which is approximately 2,365km distance.)									
			27.79	*155.25*	*0.00*	*0.00*		*183.03*	
USR ANC Mob/Demob ANC Mobilization/Demobilization	725.00	KM	20,145	112,554	0	0	0	132,699	
(Note: The Contractor will mob/demob the floating crane from the Anchorage area which is approximately 725km distance.)									
			0.00	*0.00*	*0.00*	*800.00*		*800.00*	
USR Personnel Travel and Air Fare	80.00	EA	0	0	0	64,000	0	64,000	
(Note: The Contractor will mob/demob 10 highly skilled staff from the Seattle area. It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person. Each person will fly back to Seattle 4 times per year over the 2 year project duration. Quantity of roundtrips is 10 x 4 x 2 = 80)									
Demobilization	**1.00**	**LS**	**84,683**	**553,444**	**0**	**8,000**	**0**	**646,128**	
			27.29	*186.42*	*0.00*	*0.00*		*213.71*	
USR SEA Mob/Demob SEA Mobilization/Demobilization	2,365.00	KM	64,539	440,890	0	0	0	505,429	
(Note: The Contractor will mob/demob the barge equipment from the Seattle area which is approximately 2,365km distance.)									
			27.79	*155.25*	*0.00*	*0.00*		*183.03*	
USR ANC Mob/Demob ANC Mobilization/Demobilization	725.00	KM	20,145	112,554	0	0	0	132,699	
(Note: The Contractor will mob/demob the floating crane from the Anchorage area which is approximately 725km distance.)									

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Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
			0.00	*0.00*	*0.00*	*800.00*		*800.00*	
USR Personnel Travel and Air Fare	10.00	EA	0	0	0	8,000	0	8,000	
(Note: The Contractor will mob/demob 10 highly skilled staff from the Seattle area. It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person.)									
			1,408,210.54	*185,461.80*	*89,960.50*	*0.00*		*2,929,432.84*	
JOB OFFICE OVERHEAD	**1.00**	**EA**	**1,408,211**	**185,462**	**89,961**	**0**	**1,245,800**	**2,929,433**	
			548,037.12	*122,770.79*	*0.00*	*0.00*		*896,007.92*	
SUPERVISION AND MANAGEMENT	**1.00**	**EA**	**548,037**	**122,771**	**0**	**0**	**225,200**	**896,008**	
			548,037.12	*0.00*	*0.00*	*0.00*		*548,037.12*	
Supervision Personnel	**1.00**	**EA**	**548,037**	**0**	**0**	**0**	**0**	**548,037**	
			15,223.25	*0.00*	*0.00*	*0.00*		*15,223.25*	
HNC FA-AGENS General Superintendents (P.M.)	18.00	MO	274,019	0	0	0	0	274,019	
(Note: Assumed a Carpenter / Millwright Wages plus $3.00 / hour)									
			15,223.25	*0.00*	*0.00*	*0.00*		*15,223.25*	
HNC FA-AGENS General Labor Foreman	18.00	MO	274,019	0	0	0	0	274,019	
(Note: Assumed a Carpenter / Millwright Wages plus $3.00 / hour)									
			0.00	*122,770.79*	*0.00*	*0.00*		*122,770.79*	
Management Vehicles	**1.00**	**EA**	**0**	**122,771**	**0**	**0**	**0**	**122,771**	
			0.00	*3,410.30*	*0.00*	*0.00*		*3,410.30*	
MAP T50XX005 TRUCK, HIGHWAY, CONVENTIONAL, 3/4 TON PICKUP, 4X4	18.00	MO	0	61,385	0	0	0	61,385	
			0.00	*3,410.30*	*0.00*	*0.00*		*3,410.30*	
MAP T50XX005 TRUCK, HIGHWAY, CONVENTIONAL, 3/4 TON PICKUP, 4X4	18.00	MO	0	61,385	0	0	0	61,385	
			0.00	*0.00*	*0.00*	*0.00*		*225,200.00*	
Management Subsistance and Travel	**1.00**	**EA**	**0**	**0**	**0**	**0**	**225,200**	**225,200**	
			0.00	*0.00*	*0.00*	*0.00*		*800.00*	
USR Home Office Execs Travel to Job	8.00	EA	0	0	0	0	6,400	6,400	
(Note: It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person. Assume travel once each quarter = 8 times total.)									
			0.00	*0.00*	*0.00*	*0.00*		*400.00*	
USR Daily Subsistence (Per Man Day)	547.00	DAY	0	0	0	0	218,800	218,800	
(Note: It is assumed that per diem in Valdez will be $200 per supervisor person. Cost: 2 persons x $200 = $400 per day. (18 months = 547 days))									

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
			517,170.23	*58,405.29*	*38,548.00*	*0.00*		*1,079,623.52*	
ADMINISTRATION JOB OFFICE	**1.00**	**EA**	**517,170**	**58,405**	**38,548**	**0**	**465,500**	**1,079,624**	
			380,433.93	*0.00*	*0.00*	*0.00*		*380,433.93*	
Field Office Administration Personnel	**1.00**	**EA**	**380,434**	**0**	**0**	**0**	**0**	**380,434**	
			7,551.14	*0.00*	*0.00*	*0.00*		*7,551.14*	
HNC FB-ACONT Contract Administrators	18.00	MO	135,920	0	0	0	0	135,920	
(Note: Assumed a Occupation Code of #01013 Accounting Clerk III)									
			8,126.41	*0.00*	*0.00*	*0.00*		*8,126.41*	
HNC FB-OMANGR Office Managers	18.00	MO	146,275	0	0	0	0	146,275	
(Note: Assumed a Occupation Code of #01400 Supply Technician +3.00 w/ nonething better)									
			5,457.67	*0.00*	*0.00*	*0.00*		*5,457.67*	
HNC FB-CLTYP Clerks, Typists, Bookkeepers & Receptionist	18.00	MO	98,238	0	0	0	0	98,238	
(Note: Assumed a Occupation Code of #01116 General Clerk)									
			0.00	*54,885.18*	*0.00*	*0.00*		*54,885.18*	
Field Office Vehicles	**1.00**	**EA**	**0**	**54,885**	**0**	**0**	**0**	**54,885**	
			0.00	*3,049.18*	*0.00*	*0.00*		*3,049.18*	
MAP T50XX001 TRUCK, HIGHWAY, CONVENTIONAL, 1/2 TON PICKUP, 4X2	18.00	MO	0	54,885	0	0	0	54,885	
			26,962.41	*2,571.43*	*27,548.00*	*0.00*		*59,781.84*	
Field Office Buildings & Supplies	**1.00**	**EA**	**26,962**	**2,571**	**27,548**	**0**	**2,700**	**59,782**	
			0.00	*0.00*	*293.00*	*0.00*		*293.00*	
RSM 015205000450 Office Trailer, furnished, rent per month, 50' x 10', excl. hookups	18.00	MO	0	0	5,274	0	0	5,274	
			0.00	*0.00*	*293.00*	*0.00*		*293.00*	
RSM 015205000450 Office Trailer, furnished, rent per month, 50' x 10', excl. hookups	18.00	MO	0	0	5,274	0	0	5,274	
			0.00	*142.86*	*0.00*	*0.00*		*142.86*	
USR Office Equipment & Furniture	18.00	MO	0	2,571	0	0	0	2,571	
			0.00	*0.00*	*17,000.00*	*0.00*		*17,000.00*	
USR Office - Supplies Assume 5% of Office Labor costs.	1.00	MO	0	0	17,000	0	0	17,000	

Currency in US dollars

Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
			0.00	*0.00*	*0.00*	*0.00*		*150.00*	
USR Mailing, Shipping Cost	18.00	MO	0	0	0	0	2,700	2,700	
			1,497.91	*0.00*	*0.00*	*0.00*		*1,497.91*	
USR 22 Hired Janitors, for 2 hr/night * 22 day / month = 44 hr/month	18.00	MO	26,962	0	0	0	0	26,962	
(Note: = 44 hr/month)									
			108,927.29	*948.68*	*10,000.00*	*0.00*		*119,875.97*	
Field Office Security Personnel	**1.00**	**EA**	**108,927**	**949**	**10,000**	**0**	**0**	**119,876**	
			5,804.88	*0.00*	*0.00*	*0.00*		*5,804.88*	
HNC FD-SECWT Security, Watchmen/Guards	18.00	MO	104,488	0	0	0	0	104,488	
			8.88	*1.90*	*20.00*	*0.00*		*30.78*	
RSM 028201300500 Chain link fence, industrial, galvanized steel, 6 ga. wire, 2" posts @ 10' OC,, 6' high, includes excavation	500.00	LF	4,439	949	10,000	0	0	15,388	
			0.00	*0.00*	*0.00*	*0.00*		*437,600.00*	
Field Office Subsistance and Travel	**1.00**	**EA**	**0**	**0**	**0**	**0**	**437,600**	**437,600**	
			0.00	*0.00*	*0.00*	*0.00*		*800.00*	
USR Daily Subsistence (Per Man Day)	547.00	DAY	0	0	0	0	437,600	437,600	
(Note: It is assumed that per diem in Valdez will be $100 per field person. Cost: 8 persons x $100 = $800 per day. (18 months = 547 days))									
			846.60	*0.00*	*1,000.00*	*0.00*		*10,846.60*	
Field Office Utility Installation	**1.00**	**EA**	**847**	**0**	**1,000**	**0**	**9,000**	**10,847**	
			423.30	*0.00*	*500.00*	*0.00*		*923.30*	
RSM 015100500890 Temporary electrical power equipment (pro-rated per job), connections, office trailer, 200 amp	1.00	EA	423	0	500	0	0	923	
			423.30	*0.00*	*500.00*	*0.00*		*923.30*	
RSM 015100500890 Temporary electrical power equipment (pro-rated per job), connections, office trailer, 200 amp	1.00	EA	423	0	500	0	0	923	
			0.00	*0.00*	*0.00*	*0.00*		*500.00*	
USR Install Telephone	2.00	EA	0	0	0	0	1,000	1,000	
			0.00	*0.00*	*0.00*	*0.00*		*1,500.00*	
USR Install Water Supply	2.00	EA	0	0	0	0	3,000	3,000	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
			0.00	*0.00*	*0.00*	*0.00*		*2,500.00*	
USR Install Sewer Connection	2.00	EA	0	0	0	0	5,000	5,000	
			0.00	*0.00*	*0.00*	*0.00*		*16,200.00*	
Field Office Utility Usage Fees	**1.00**	**EA**	**0**	**0**	**0**	**0**	**16,200**	**16,200**	
			0.00	*0.00*	*0.00*	*0.00*		*500.00*	
USR Office Telephone including Long Distance	18.00	MO	0	0	0	0	9,000	9,000	
			0.00	*0.00*	*0.00*	*0.00*		*200.00*	
USR Office Temporary Power / Lighting	18.00	MO	0	0	0	0	3,600	3,600	
			0.00	*0.00*	*0.00*	*0.00*		*75.00*	
USR Garbage Service	18.00	MO	0	0	0	0	1,350	1,350	
			0.00	*0.00*	*0.00*	*0.00*		*75.00*	
USR Water Usage Fees	18.00	MO	0	0	0	0	1,350	1,350	
			0.00	*0.00*	*0.00*	*0.00*		*50.00*	
USR Sewer Usage Fees	18.00	MO	0	0	0	0	900	900	
			69,543.31	*4,285.71*	*6,600.00*	*0.00*		*81,029.03*	
ENGINEERING AND SURVEYING	**1.00**	**EA**	**69,543**	**4,286**	**6,600**	**0**	**600**	**81,029**	
			69,543.31	*4,285.71*	*6,600.00*	*0.00*		*81,029.03*	
Field Engineering	**1.00**	**EA**	**69,543**	**4,286**	**6,600**	**0**	**600**	**81,029**	
			11,590.55	*0.00*	*0.00*	*0.00*		*11,590.55*	
HNC FC-ENGPE Engineers, Project	6.00	MO	69,543	0	0	0	0	69,543	
(Note: Assumed a Occupation Code of #29086 Engineer Technician IV)									
			0.00	*0.00*	*0.00*	*0.00*		*100.00*	
USR Mailing, Shipping Drawing and Submittal cost	6.00	MO	0	0	0	0	600	600	
			0.00	*0.00*	*1,100.00*	*0.00*		*1,100.00*	
USR Engineering - Plans & Supplies Assume 5% of Labor cost.	6.00	MO	0	0	6,600	0	0	6,600	
			0.00	*714.29*	*0.00*	*0.00*		*714.29*	
USR Engineering - Equipment	6.00	MO	0	4,286	0	0	0	4,286	
			194,435.00	*0.00*	*0.00*	*0.00*		*194,435.00*	
QUALITY CONTROL AND TESTING	**1.00**	**EA**	**194,435**	**0**	**0**	**0**	**0**	**194,435**	
			194,435.00	*0.00*	*0.00*	*0.00*		*194,435.00*	
Quality Control Personnel	**1.00**	**EA**	**194,435**	**0**	**0**	**0**	**0**	**194,435**	

Currency in US dollars

Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
			9,721.75	*0.00*	*0.00*	*0.00*		*9,721.75*	
HNC FC-ENGQC Engineers, Quality Control	10.00	MO	97,217	0	0	0	0	97,217	
(Note: Assumed a Occupation Code of #29086 Engineer Technician III)									
			9,721.75	*0.00*	*0.00*	*0.00*		*9,721.75*	
HNC FC-INSPE Inspectors	10.00	MO	97,217	0	0	0	0	97,217	
(Note: Assumed a Occupation Code of #29063 Drafter II)									
			1,325.82	*0.00*	*26,874.00*	*0.00*		*28,199.82*	
SANITATION FAC & TEMP BLDGS	**1.00**	**EA**	**1,326**	**0**	**26,874**	**0**	**0**	**28,200**	
			0.00	*0.00*	*10,800.00*	*0.00*		*10,800.00*	
Sanitation Facilities	**1.00**	**EA**	**0**	**0**	**10,800**	**0**	**0**	**10,800**	
			0.00	*0.00*	*600.00*	*0.00*		*600.00*	
HNC 015205001400 Toilet, portable, chemical, rent per month	18.00	MO	0	0	10,800	0	0	10,800	
(Note: Assume 6 toilets at $100/toilet/mo = 6 x $100 x 29 = $17,000)									
			1,325.82	*0.00*	*16,074.00*	*0.00*		*17,399.82*	
Temporary Buildings	**1.00**	**EA**	**1,326**	**0**	**16,074**	**0**	**0**	**17,400**	
			0.00	*0.00*	*109.00*	*0.00*		*109.00*	
RSM 015205001350 Storage Boxes, rent per month, 40' x 8'	18.00	MO	0	0	1,962	0	0	1,962	
			0.00	*0.00*	*109.00*	*0.00*		*109.00*	
RSM 015205001350 Storage Boxes, rent per month, 40' x 8'	18.00	MO	0	0	1,962	0	0	1,962	
			441.94	*0.00*	*4,050.00*	*0.00*		*4,491.94*	
USR 015901161 8'X 8'X 8'H(64 SF) Job Shack on skids. Site made.	3.00	EA	1,326	0	12,150	0	0	13,476	
			72,395.77	*0.00*	*2,482.50*	*0.00*		*79,378.27*	
PROJECT UTILITIES SITE & CLEANUP	**1.00**	**EA**	**72,396**	**0**	**2,483**	**0**	**4,500**	**79,378**	
			72,395.77	*0.00*	*0.00*	*0.00*		*73,295.77*	
Site Cleanup	**1.00**	**EA**	**72,396**	**0**	**0**	**0**	**900**	**73,296**	
			4,021.99	*0.00*	*0.00*	*0.00*		*4,021.99*	
USR 84 Daily Site Cleanup, 1 laborer * 2 hrs/day * 22 day/mo = 44mhrs	18.00	MO	72,396	0	0	0	0	72,396	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
			0.00	*0.00*	*0.00*	*0.00*		*50.00*	
USR Rental, Dumpster 20CY Trash Bin,	18.00	MO	0	0	0	0	900	900	
			0.00	*0.00*	*2,482.50*	*0.00*		*6,082.50*	
Misc Project Expenses	**1.00**	**EA**	**0**	**0**	**2,483**	**0**	**3,600**	**6,083**	
			0.00	*0.00*	*16.55*	*0.00*		*16.55*	
RSM 015807000020 Project Signs, sign, Hi-intensity reflectorized, buy, excl. posts	150.00	SF	0	0	2,483	0	0	2,483	
			0.00	*0.00*	*0.00*	*0.00*		*300.00*	
USR Snow Removal	12.00	MO	0	0	0	0	3,600	3,600	
			5,303.29	*0.00*	*15,456.00*	*0.00*		*20,759.29*	
WINTERIZE PROJECT	**1.00**	**EA**	**5,303**	**0**	**15,456**	**0**	**0**	**20,759**	
			5,303.29	*0.00*	*15,456.00*	*0.00*		*20,759.29*	
Winterize Project	**1.00**	**EA**	**5,303**	**0**	**15,456**	**0**	**0**	**20,759**	
			0.00	*0.00*	*192.00*	*0.00*		*192.00*	
USR Rental, Heaters to 50 K-BTU/hr (Space) Oil, Gas or Lp Gas fired	18.00	MO	0	0	3,456	0	0	3,456	
(Note: Uses approx. 1.8 Lbs/hr. Lp Gas.)									
			220.97	*0.00*	*500.00*	*0.00*		*720.97*	
USR 85 Winterize - Buildings	12.00	MO	2,652	0	6,000	0	0	8,652	
			220.97	*0.00*	*500.00*	*0.00*		*720.97*	
USR 86 Winterize - Equipment	12.00	MO	2,652	0	6,000	0	0	8,652	
			0.00	*0.00*	*0.00*	*0.00*		*550,000.00*	
INSURANCE, INTEREST, PERMITS & FEES	**1.00**	**EA**	**0**	**0**	**0**	**0**	**550,000**	**550,000**	
			0.00	*0.00*	*0.00*	*0.00*		*550,000.00*	
Insurance Costs	**1.00**	**EA**	**0**	**0**	**0**	**0**	**550,000**	**550,000**	
USR Marine Insurance Premiums	1.00	LS	0	0	0	0	550,000	550,000	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
Job Office Overhead Bare to Direct Report											
Prime Dredging Contractor											
			3,197,458.95	*749,777.55%*	*151,417.18%*					*4,317,905.42*	
OVERHEAD ITEMS	**1.00**	**EA**	**3,197,459**	**749,778**	**151,417**	**0**	**0**	**150,507**	**68,745**	**4,317,905**	
			40,217.51	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*40,217.51*	
USR ST Small Tools	1.00	EA	40,218	0	0	0	0	0	0	40,218	
			940,486.08	*372,208.32%*	*12,769.39%*					*1,348,255.08*	
MOBILIZATION/DEMOBILIZATION	**1.00**	**EA**	**940,486**	**372,208**	**12,769**	**0**	**0**	**16,411**	**6,381**	**1,348,255**	
Mobilization	**1.00**	**LS**	**498,243**	**186,104**	**6,385**	**0**	**0**	**8,205**	**3,190**	**702,128**	
			145.43	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*213.71*	
USR SEA Mob/Demob SEA Mobilization/Demobilization	2,365.00	KM	343,947	147,406	5,396	0	0	6,253	2,427	505,429	
(Note: The Contractor will mob/demob the barge equipment from the Seattle area which is approximately 2,365km distance.)											
			124.55	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*183.03*	
USR ANC Mob/Demob ANC Mobilization/Demobilization	725.00	KM	90,296	38,698	989	0	0	1,952	764	132,699	
(Note: The Contractor will mob/demob the floating crane from the Anchorage area which is approximately 725km distance.)											
			800.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*800.00*	
USR Personnel Travel and Air Fare	80.00	EA	64,000	0	0	0	0	0	0	64,000	
(Note: The Contractor will mob/demob 10 highly skilled staff from the Seattle area. It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person. Each person will fly back to Seattle 4 times per year over the 2 year project duration. Quantity of roundtrips is 10 x 4 x 2 = 80)											
Demobilization	**1.00**	**LS**	**442,243**	**186,104**	**6,385**	**0**	**0**	**8,205**	**3,190**	**646,128**	
			145.43	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*213.71*	
USR SEA Mob/Demob SEA Mobilization/Demobilization	2,365.00	KM	343,947	147,406	5,396	0	0	6,253	2,427	505,429	
(Note: The Contractor will mob/demob the barge equipment from the Seattle area which is approximately 2,365km distance.)											
			124.55	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*183.03*	
USR ANC Mob/Demob ANC Mobilization/Demobilization	725.00	KM	90,296	38,698	989	0	0	1,952	764	132,699	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
(Note: The Contractor will mob/demob the floating crane from the Anchorage area which is approximately 725km distance.)											
			800.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*800.00*	
USR Personnel Travel and Air Fare	10.00	EA	8,000	0	0	0	0	0	0	8,000	
(Note: The Contractor will mob/demob 10 highly skilled staff from the Seattle area. It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person.)											
			2,216,755.37	*377,569.23%*	*138,647.79%*					*2,929,432.84*	
JOB OFFICE OVERHEAD	**1.00**	**EA**	**2,216,755**	**377,569**	**138,648**	**0**	**0**	**134,096**	**62,364**	**2,929,433**	
			602,866.57	*161,857.10%*	*54,214.53%*					*896,007.92*	
SUPERVISION AND MANAGEMENT	**1.00**	**EA**	**602,867**	**161,857**	**54,215**	**0**	**0**	**52,683**	**24,386**	**896,008**	
			291,720.00	*125,022.86%*	*54,224.56%*					*548,037.12*	
Supervision Personnel	**1.00**	**EA**	**291,720**	**125,023**	**54,225**	**0**	**0**	**52,683**	**24,386**	**548,037**	
			8,103.33	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*15,223.25*	
HNC FA-AGENS General Superintendents (P.M.)	18.00	MO	145,860	62,511	27,112	0	0	26,342	12,193	274,019	
(Note: Assumed a Carpenter / Millwright Wages plus $3.00 / hour)											
			8,103.33	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*15,223.25*	
HNC FA-AGENS General Labor Foreman	18.00	MO	145,860	62,511	27,112	0	0	26,342	12,193	274,019	
(Note: Assumed a Carpenter / Millwright Wages plus $3.00 / hour)											
			85,946.57	*36,834.25%*	*10.03%-*					*122,770.79*	
Management Vehicles	**1.00**	**EA**	**85,947**	**36,834**	**10-**	**0**	**0**	**0**	**0**	**122,771**	
			2,387.40	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*3,410.30*	
MAP T50XX005 TRUCK, HIGHWAY, CONVENTIONAL, 3/4 TON PICKUP, 4X4	18.00	MO	42,973	18,417	5-	0	0	0	0	61,385	
			2,387.40	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*3,410.30*	
MAP T50XX005 TRUCK, HIGHWAY, CONVENTIONAL, 3/4 TON PICKUP, 4X4	18.00	MO	42,973	18,417	5-	0	0	0	0	61,385	
			225,200.00	*0.00%*	*0.00%*					*225,200.00*	
Management Subsistance and Travel	**1.00**	**EA**	**225,200**	**0**	**0**	**0**	**0**	**0**	**0**	**225,200**	
			800.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*800.00*	
USR Home Office Execs Travel to Job	8.00	EA	6,400	0	0	0	0	0	0	6,400	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
(Note: It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person. Assume travel once each quarter = 8 times total.)											
			400.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*400.00*	
USR Daily Subsistence (Per Man Day)	547.00	DAY	218,800	0	0	0	0	0	0	218,800	
(Note: It is assumed that per diem in Valdez will be $200 per supervisor person. Cost: 2 persons x $200 = $400 per day. (18 months = 547 days))											
			820,244.09	*135,512.61%*	*51,917.91%*					*1,079,623.52*	
ADMINISTRATION JOB OFFICE	**1.00**	**EA**	**820,244**	**135,513**	**51,918**	**0**	**0**	**48,594**	**23,354**	**1,079,624**	
			202,020.00	*86,580.00%*	*38,658.59%*					*380,433.93*	
Field Office Administration Personnel	**1.00**	**EA**	**202,020**	**86,580**	**38,659**	**0**	**0**	**35,789**	**17,386**	**380,434**	
			3,998.80	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*7,551.14*	
HNC FB-ACONT Contract Administrators	18.00	MO	71,978	30,848	13,991	0	0	12,811	6,292	135,920	
(Note: Assumed a Occupation Code of #01013 Accounting Clerk III)											
			4,291.73	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*8,126.41*	
HNC FB-OMANGR Office Managers	18.00	MO	77,251	33,108	15,246	0	0	13,813	6,857	146,275	
(Note: Assumed a Occupation Code of #01400 Supply Technician +3.00 w/ nonething better)											
			2,932.80	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*5,457.67*	
HNC FB-CLTYP Clerks, Typists, Bookkeepers & Receptionist	18.00	MO	52,790	22,624	9,421	0	0	9,165	4,237	98,238	
(Note: Assumed a Occupation Code of #01116 General Clerk)											
			38,422.16	*16,466.64%*	*3.63%-*					*54,885.18*	
Field Office Vehicles	**1.00**	**EA**	**38,422**	**16,467**	**4-**	**0**	**0**	**0**	**0**	**54,885**	
			2,134.56	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*3,049.18*	
MAP T50XX001 TRUCK, HIGHWAY, CONVENTIONAL, 1/2 TON PICKUP, 4X2	18.00	MO	38,422	16,467	4-	0	0	0	0	54,885	
			46,471.48	*6,952.92%*	*2,644.63%*					*59,781.84*	
Field Office Buildings & Supplies	**1.00**	**EA**	**46,471**	**6,953**	**2,645**	**0**	**0**	**2,523**	**1,189**	**59,782**	
			293.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*293.00*	
RSM 015205000450 Office Trailer, furnished, rent per month, 50' x 10', excl. hookups	18.00	MO	5,274	0	0	0	0	0	0	5,274	

Currency in US dollars

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
			293.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*293.00*	
RSM 015205000450 Office Trailer, furnished, rent per month, 50' x 10', excl. hookups	18.00	MO	5,274	0	0	0	0	0	0	5,274	
			100.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*142.86*	
USR Office Equipment & Furniture	18.00	MO	1,800	771	0	0	0	0	0	2,571	
			17,000.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*17,000.00*	
USR Office - Supplies Assume 5% of Office Labor costs.	1.00	MO	17,000	0	0	0	0	0	0	17,000	
			150.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*150.00*	
USR Mailing, Shipping Cost	18.00	MO	2,700	0	0	0	0	0	0	2,700	
			801.30	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*1,497.91*	
USR 22 Hired Janitors, for 2 hr/night * 22 day / month = 44 hr/month	18.00	MO	14,423	6,181	2,645	0	0	2,523	1,189	26,962	
(Note: = 44 hr/month)											
			69,067.49	*25,314.64%*	*10,547.27%*					*119,875.97*	
Field Office Security Personnel	**1.00**	**EA**	**69,067**	**25,315**	**10,547**	**0**	**0**	**10,199**	**4,747**	**119,876**	
			3,109.60	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*5,804.88*	
HNC FD-SECWT Security, Watchmen/Guards	18.00	MO	55,973	23,988	10,179	0	0	9,770	4,578	104,488	
			26.19	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*30.78*	
RSM 028201300500 Chain link fence, industrial, galvanized steel, 6 ga. wire, 2" posts @ 10' OC,, 6' high, includes excavation	500.00	LF	13,095	1,326	368	0	0	430	169	15,388	
			437,600.00	*0.00%*	*0.00%*					*437,600.00*	
Field Office Subsistance and Travel	**1.00**	**EA**	**437,600**	**0**	**0**	**0**	**0**	**0**	**0**	**437,600**	
			800.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*800.00*	
USR Daily Subsistence (Per Man Day)	547.00	DAY	437,600	0	0	0	0	0	0	437,600	
(Note: It is assumed that per diem in Valdez will be $100 per field person. Cost: 8 persons x $100 = $800 per day. (18 months = 547 days))											
			10,462.96	*198.41%*	*71.06%*					*10,846.60*	
Field Office Utility Installation	**1.00**	**EA**	**10,463**	**198**	**71**	**0**	**0**	**82**	**32**	**10,847**	
			731.48	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*923.30*	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
RSM 015100500890 Temporary electrical power equipment (pro-rated per job), connections, office trailer, 200 amp	1.00	EA	731	99	36	0	0	41	16	923	
			731.48	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*923.30*	
RSM 015100500890 Temporary electrical power equipment (pro-rated per job), connections, office trailer, 200 amp	1.00	EA	731	99	36	0	0	41	16	923	
			500.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*500.00*	
USR Install Telephone	2.00	EA	1,000	0	0	0	0	0	0	1,000	
			1,500.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1,500.00*	
USR Install Water Supply	2.00	EA	3,000	0	0	0	0	0	0	3,000	
			2,500.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*2,500.00*	
USR Install Sewer Connection	2.00	EA	5,000	0	0	0	0	0	0	5,000	
			16,200.00	*0.00%*	*0.00%*					*16,200.00*	
Field Office Utility Usage Fees	**1.00**	**EA**	**16,200**	**0**	**0**	**0**	**0**	**0**	**0**	**16,200**	
			500.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*500.00*	
USR Office Telephone including Long Distance	18.00	MO	9,000	0	0	0	0	0	0	9,000	
			200.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*200.00*	
USR Office Temporary Power / Lighting	18.00	MO	3,600	0	0	0	0	0	0	3,600	
			75.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*75.00*	
USR Garbage Service	18.00	MO	1,350	0	0	0	0	0	0	1,350	
			75.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*75.00*	
USR Water Usage Fees	18.00	MO	1,350	0	0	0	0	0	0	1,350	
			50.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*50.00*	
USR Sewer Usage Fees	18.00	MO	900	0	0	0	0	0	0	900	
			47,078.40	*17,090.74%*	*7,048.65%*					*81,029.03*	
ENGINEERING AND SURVEYING	**1.00**	**EA**	**47,078**	**17,091**	**7,049**	**0**	**0**	**6,641**	**3,170**	**81,029**	
			47,078.40	*17,090.74%*	*7,048.65%*					*81,029.03*	
Field Engineering	**1.00**	**EA**	**47,078**	**17,091**	**7,049**	**0**	**0**	**6,641**	**3,170**	**81,029**	
			6,146.40	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*11,590.55*	
HNC FC-ENGPE Engineers, Project	6.00	MO	36,878	15,805	7,049	0	0	6,641	3,170	69,543	

(Note: Assumed a Occupation Code of #29086 Engineer Technician IV)

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
			100.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*100.00*	
USR Mailing, Shipping Drawing and Submittal cost	6.00	MO	600	0	0	0	0	0	0	600	
			1,100.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1,100.00*	
USR Engineering - Plans & Supplies Assume 5% of Labor cost.	6.00	MO	6,600	0	0	0	0	0	0	6,600	
			500.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*714.29*	
USR Engineering - Equipment	6.00	MO	3,000	1,286	0	0	0	0	0	4,286	
			103,896.00	*44,526.86%*	*18,963.16%*					*194,435.00*	
QUALITY CONTROL AND TESTING	**1.00**	**EA**	**103,896**	**44,527**	**18,963**	**0**	**0**	**18,521**	**8,528**	**194,435**	
			103,896.00	*44,526.86%*	*18,963.16%*					*194,435.00*	
Quality Control Personnel	**1.00**	**EA**	**103,896**	**44,527**	**18,963**	**0**	**0**	**18,521**	**8,528**	**194,435**	
			5,194.80	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*9,721.75*	
HNC FC-ENGQC Engineers, Quality Control	10.00	MO	51,948	22,263	9,482	0	0	9,260	4,264	97,217	
(Note: Assumed a Occupation Code of #29086 Engineer Technician III)											
			5,194.80	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*9,721.75*	
HNC FC-INSPE Inspectors	10.00	MO	51,948	22,263	9,482	0	0	9,260	4,264	97,217	
(Note: Assumed a Occupation Code of #29063 Drafter II)											
			27,599.46	*310.91%*	*110.94%*					*28,199.82*	
SANITATION FAC & TEMP BLDGS	**1.00**	**EA**	**27,599**	**311**	**111**	**0**	**0**	**129**	**50**	**28,200**	
			10,800.00	*0.00%*	*0.00%*					*10,800.00*	
Sanitation Facilities	**1.00**	**EA**	**10,800**	**0**	**0**	**0**	**0**	**0**	**0**	**10,800**	
			600.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*600.00*	
HNC 015205001400 Toilet, portable, chemical, rent per month	18.00	MO	10,800	0	0	0	0	0	0	10,800	
(Note: Assume 6 toilets at $100/toilet/mo = 6 x $100 x 29 = $17,000)											
			16,799.46	*310.91%*	*110.94%*					*17,399.82*	
Temporary Buildings	**1.00**	**EA**	**16,799**	**311**	**111**	**0**	**0**	**129**	**50**	**17,400**	
			109.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*109.00*	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
RSM 015205001350 Storage Boxes, rent per month, 40' x 8'	18.00	MO	1,962	0	0	0	0	0	0	1,962	
			109.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*109.00*	
RSM 015205001350 Storage Boxes, rent per month, 40' x 8'	18.00	MO	1,962	0	0	0	0	0	0	1,962	
			4,291.82	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*4,491.94*	
USR 015901161 8'X 8'X 8'H(64 SF) Job Shack on skids. Site made.	3.00	EA	12,875	311	111	0	0	129	50	13,476	
			46,713.00	*17,027.36%*	*5,948.84%*					*79,378.27*	
PROJECT UTILITIES SITE & CLEANUP	**1.00**	**EA**	**46,713**	**17,027**	**5,949**	**0**	**0**	**7,014**	**2,675**	**79,378**	
			40,630.50	*17,027.36%*	*5,948.84%*					*73,295.77*	
Site Cleanup	**1.00**	**EA**	**40,631**	**17,027**	**5,949**	**0**	**0**	**7,014**	**2,675**	**73,296**	
			2,207.25	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*4,021.99*	
USR 84 Daily Site Cleanup, 1 laborer * 2 hrs/day * 22 day/mo = 44mhrs	18.00	MO	39,731	17,027	5,949	0	0	7,014	2,675	72,396	
			50.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*50.00*	
USR Rental, Dumpster 20CY Trash Bin,	18.00	MO	900	0	0	0	0	0	0	900	
			6,082.50	*0.00%*	*0.00%*					*6,082.50*	
Misc Project Expenses	**1.00**	**EA**	**6,083**	**0**	**0**	**0**	**0**	**0**	**0**	**6,083**	
			16.55	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*16.55*	
RSM 015807000020 Project Signs, sign, Hi-intensity reflectorized, buy, excl. posts	150.00	SF	2,483	0	0	0	0	0	0	2,483	
			300.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*300.00*	
USR Snow Removal	12.00	MO	3,600	0	0	0	0	0	0	3,600	
			18,357.84	*1,243.65%*	*443.76%*					*20,759.29*	
WINTERIZE PROJECT	**1.00**	**EA**	**18,358**	**1,244**	**444**	**0**	**0**	**514**	**200**	**20,759**	
			18,357.84	*1,243.65%*	*443.76%*					*20,759.29*	
Winterize Project	**1.00**	**EA**	**18,358**	**1,244**	**444**	**0**	**0**	**514**	**200**	**20,759**	
			192.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*192.00*	
USR Rental, Heaters to 50 K-BTU/hr (Space) Oil, Gas or Lp Gas fired	18.00	MO	3,456	0	0	0	0	0	0	3,456	
(Note: Uses approx. 1.8 Lbs/hr. Lp Gas.)											

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
			620.91	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*720.97*	
USR 85 Winterize - Buildings	12.00	MO	7,451	622	222	0	0	257	100	8,652	
			620.91	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*720.97*	
USR 86 Winterize - Equipment	12.00	MO	7,451	622	222	0	0	257	100	8,652	
			550,000.00	*0.00%*	*0.00%*					*550,000.00*	
INSURANCE, INTEREST, PERMITS & FEES	**1.00**	**EA**	**550,000**	**0**	**0**	**0**	**0**	**0**	**0**	**550,000**	
			550,000.00	*0.00%*	*0.00%*					*550,000.00*	
Insurance Costs	**1.00**	**EA**	**550,000**	**0**	**0**	**0**	**0**	**0**	**0**	**550,000**	
USR Marine Insurance Premiums	1.00	LS	550,000	0	0	0	0	0	0	550,000	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
Crews (Bare Costs) by Contractor, Report		**6,627.91**			**39,530.50**	**1,925,358.49**	**23,703.14**	**4,395,616.31**	**6,320,974.80**
Prime Dredging Contractor	**LaborCost1**	**6,627.91**		**0.00**	**39,530.50**	**1,925,358.49**	**23,703.14**	**4,395,616.31**	**6,320,974.80**
					1.00	*18.43*	*0.00*	*0.00*	*18.43*
CIV UFLDB 1 janitor	LaborCost1	1,118.01			1,118.01	20,604.97	0.00	0.00	20,604.97
FOP FB-JANTR Janitors			*Journeyman*	*18.43*	*1.00*	*18.43*			
					2.25	*120.91*	*0.00*	*0.00*	*120.91*
MIL ACARD 2 carpnters	LaborCost1	42.86			96.43	5,181.86	0.00	0.00	5,181.86
MIL B-CARPNTER Carpenters			*Journeyman*	*53.56*	*2.00*	*107.12*			
MIL B-CARPNTER Carpenters			*Foreman*	*55.16*	*0.25*	*13.79*			
					1.30	*61.80*	*0.00*	*0.00*	*61.80*
MIL ULABA 1 laborer	LaborCost1	918.37			1,193.88	56,757.86	0.00	0.00	56,757.86
MIL B-LABORER Laborers, (Semi-Skilled)			*Foreman*	*48.31*	*0.30*	*14.49*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*1.00*	*47.31*			
					1.00	*57.87*	*0.00*	*0.00*	*57.87*
RSM 1ELEC 1 ELEC	LaborCost1	11.43			11.43	661.37	0.00	0.00	661.37
MIL B-ELECTRN Electricians			*Journeyman*	*57.87*	*1.00*	*57.87*			
					3.00	*145.48*	*2.00*	*40.20*	*185.68*
RSM B80C B80C	LaborCost1	23.81			71.43	3,463.81	47.62	957.18	4,420.99
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*2.00*	*94.62*			
MIL B-TRKDVRLT Truck Drivers, Light			*Journeyman*	*50.86*	*1.00*	*50.86*			
GEN L15Z4050 POST HOLE DRILL, UP TO 8" (203 MM) DIA, 30" (762 MM) DEEP, ONE MAN OPERATION			*EP / Average*	*1.50*			*1.00*	*1.50*	
GEN T50Z7360 TRUCK, HIGHWAY, 20,000 LBS (9,000 KG) GVW, 2 AXLE, 4X2 WITH FLATBED			*EP / Average*	*38.71*			*1.00*	*38.71*	
					14.00	*727.92*	*1.00*	*4.16*	*732.08*
RSM C14C C14C	LaborCost1	2.83			39.57	2,057.48	2.83	11.76	2,069.24
MIL B-CEMTFINR Cement Finishers			*Journeyman*	*52.08*	*1.00*	*52.08*			
MIL B-CARPNTER Carpenters			*Foreman*	*55.16*	*1.00*	*55.16*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*4.00*	*189.24*			
MIL B-RODMAN Rodmen, (Reinforcing)			*Journeyman*	*55.04*	*2.00*	*110.08*			
MIL B-CARPNTER Carpenters			*Journeyman*	*53.56*	*6.00*	*321.36*			

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
GEN XMEZ9520 CONCRETE VIBRATOR, 2.5" (63.5 MM) DIA, W/7.5 HP (5.6 KW) GENERATOR			*Non-EP / Average*	*4.16*			*1.00*	*4.16*	
					3.00	*151.89*	*4.00*	*1,093.58*	*1,245.47*
USR ANC Mob/Demob ANC Mob/Demob	LaborCost1	207.14			621.43	31,462.93	828.57	226,526.67	257,989.59
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*1.00*	*55.94*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*1.00*	*47.31*			
GEN B25Z1065 BUCKET, CLAMSHELL, 2.4 CY(1.8 M3) GENERAL PURPOSE, SQUARE NOSE (ADD TEETH WEAR COST)			*EP / Average*	*13.22*			*1.00*	*13.22*	
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)			*Non-EP / Average*	*92.00*			*1.00*	*92.00*	
GEN C85Z2398 CRANE, MECHANICAL, LATTICE BOOM, CRAWLER, DRAGLINE/CLAMSHELL, 2.5 CY (1.9 M3), 60 TON (54 MT), 50' (15.2 M) BOOM (ADD BUCKET)			*EP / Standby*	*38.35*			*1.00*	*38.35*	
USR XX0XX630 TOWING VESSEL TUG, 3000 HP 0			*Non-EP / Average*	*950.00*			*1.00*	*950.00*	
					8.25	*403.43*	*4.00*	*568.70*	*972.13*
USR Dredge Dredging Crew	LaborCost1	545.62			4,501.38	220,117.60	2,182.49	310,296.65	530,414.25
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*1.25*	*69.93*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Foreman*	*48.31*	*1.00*	*48.31*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*5.00*	*236.55*			
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)			*Non-EP / Average*	*92.00*			*1.00*	*92.00*	
USR XX0XX610 WORK TUG, 1000 HP 0			*Non-EP / Standby*	*46.73*			*0.75*	*35.05*	
USR XX0XX610 WORK TUG, 1000 HP 0			*Non-EP / Average*	*516.72*			*0.25*	*129.18*	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
MAP C85MA003 CRANES, MECHANICAL, LATTICE BOOM, CRAWLER, DRAGLINE/CLAMSHELL, 7.0 CY, 140' BOOM (ADD BUCKET)			*EP / Average*	*288.80*			*1.00*	*288.80*	
EP B25XX019 BUCKET, CLAMSHELL, 7.5 CY, SQUARE NOSE, STANDARD			*EP / Severe*	*23.68*			*1.00*	*23.68*	
					8.00	*388.44*	*4.00*	*871.68*	*1,260.12*
USR Dump Scow Dump Scow & Tug Crew	LaborCost1	450.32			3,602.58	174,923.26	1,801.29	392,537.08	567,460.34
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*1.00*	*55.94*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*6.00*	*283.86*			
USR XX0XX610 WORK TUG, 1000 HP 0			*Non-EP / Average*	*516.72*			*1.00*	*516.72*	
USR XX0XX800 DUMP SCOW BARGE, 1,500 CY APPROX. 200'x 50' x 15'			*Non-EP / Average*	*118.32*			*3.00*	*354.96*	
					4.00	*199.20*	*1.00*	*152.48*	*351.68*
USR Off Load Dredged Material Off Load Crew	LaborCost1	366.77			1,467.08	73,060.46	366.77	55,924.73	128,985.19
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*1.00*	*55.94*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*2.00*	*94.62*			
EP C75TD008 CRANES, HYDRAULIC, SELF-PROPELLED, ROUGH TERRAIN, 65 TON, 180' BOOM, 4X4			*EP / Average*	*152.48*			*1.00*	*152.48*	
					11.00	*548.96*	*7.00*	*1,123.70*	*1,672.66*
USR Rock Rock Placement Crew	LaborCost1	2,248.13			24,729.40	1,234,131.95	15,736.89	2,526,230.64	3,760,362.59
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*2.00*	*97.28*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*6.00*	*283.86*			
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*3.00*	*167.82*			
EP B25XX014 BUCKET, CLAMSHELL, 5.0 CY, SQUARE NOSE, STANDARD			*EP / Average*	*13.21*			*1.00*	*13.21*	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)			*Non-EP / Average*	*92.00*			*1.00*	*92.00*	
USR XX0XX610 WORK TUG, 1000 HP 0			*Non-EP / Average*	*516.72*			*0.50*	*258.36*	
USR XX0XX610 WORK TUG, 1000 HP 0			*Non-EP / Standby*	*46.73*			*0.50*	*23.37*	
USR XX0XX800 DUMP SCOW BARGE, 1,500 CY APPROX. 200'x 50' x 15'			*Non-EP / Average*	*118.32*			*2.00*	*236.64*	
MAP C85MA003 CRANES, MECHANICAL, LATTICE BOOM, CRAWLER, DRAGLINE/CLAMSHELL, 7.0 CY, 140' BOOM (ADD BUCKET)			*EP / Average*	*288.80*			*1.00*	*288.80*	
EP H25CA030 HYDRAULIC EXCAVATOR, CRAWLER, 175,500 LBS, 5.00 CY BUCKET, 34.75' MAX DIGGING DEPTH			*EP / Average*	*211.33*			*1.00*	*211.33*	
					3.00	*149.36*	*4.00*	*1,304.96*	*1,454.32*
USR SEA Mob/Demob SEA Mob/Demob	LaborCost1	675.71			2,027.14	100,924.69	2,702.86	881,780.11	982,704.80
MIL B-EQOPRMED Equip. Operators, Medium			*Journeyman*	*53.41*	*1.00*	*53.41*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*1.00*	*47.31*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
USR XX0XX800 DUMP SCOW BARGE, 1,500 CY APPROX. 200'x 50' x 15'			*Non-EP / Average*	*118.32*			*3.00*	*354.96*	
USR XX0XX630 TOWING VESSEL TUG, 3000 HP 0			*Non-EP / Average*	*950.00*			*1.00*	*950.00*	
Surveyor Subcontractor	**LaborCost1**	**16.91**		**0.00**	**50.74**	**2,010.26**	**33.83**	**1,351.49**	**3,361.75**
					3.00	*118.85*	*2.00*	*79.90*	*198.75*
USR A7 A7	LaborCost1	16.91			50.74	2,010.26	33.83	1,351.49	3,361.75
MIL X-RODMAN Outside Rodmen			*Journeyman*	*55.04*	*1.00*	*55.04*			
FOP FC-SURYR Surveyors			*Journeyman*	*28.35*	*1.00*	*28.35*			
FOP FC-FLDER Field Engineers			*Journeyman*	*35.46*	*1.00*	*35.46*			
EP M10SM004 MARINE EQUIPMENT, BOATS & LAUNCHES, 23' LITTLE GIANT, W/CABIN TRI-HULL, CAP 3,400 LBS, OUTBOARD, 23.4' X 8.5' X 1.2'			*EP / Average*	*78.17*			*1.00*	*78.17*	
GEN XMEZ8815 LASER LEVEL FOR PIPES			*Non-EP / Average*	*1.73*			*1.00*	*1.73*	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	SUIExperience	SUIRate	FICA	FUIRate	PayrollTax	State	ContractorCla	WCIBaseRate	WCIExperience	WCIRate
Contractors Labor Payroll Markup Report										
1 Prime Dredging Contractor	**80.00**	**2.95**	**7.65**	**0.80**	**11.40**	**AK**	**Excavation -- rock/earth NOC**	**8.82**	**85.00**	**7.50**
1.4 Surveyor Subcontractor	**80.00**	**2.95**	**7.65**	**0.80**	**11.40**	**AK**	**Excavation -- rock/earth NOC**	**8.82**	**85.00**	**7.50**

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	LaborRate	LaborType	ManHours	BaseWage	Travel	TaxableFringe	NonTaxFringe	Subsistence	Payroll	WCI	Overtime	Total
Labor by Contractor, Report												
Prime Dredging Contractor												
				35.93	*0.00*	*18.23*	*1.00*	*0.00*				*71.78*
Carpenters	LaborCost1	Foreman	14	487	0	247	14	0	107	36	81	972
				34.33	*0.00*	*18.23*	*1.00*	*0.00*				*69.48*
Carpenters	LaborCost1	Journeyman	103	3,525	0	1,872	103	0	783	264	588	7,134
				34.68	*0.00*	*16.40*	*1.00*	*0.00*				*66.94*
Cement Finishers	LaborCost1	Journeyman	3	98	0	46	3	0	18	7	16	189
				12.68	*0.00*	*3.24*	*1.00*	*0.00*				*22.04*
Clerks, Typists, Bookkeepers & Receptionist	LaborCost1	Journeyman	4,457	56,517	0	14,441	4,457	0	9,165	4,237	9,421	98,238
				18.83	*0.00*	*3.24*	*1.00*	*0.00*				*30.49*
Contract Administrators	LaborCost1	Journeyman	4,457	83,928	0	14,441	4,457	0	12,811	6,292	13,991	135,920
				37.30	*0.00*	*19.57*	*1.00*	*0.00*				*74.43*
Electricians	LaborCost1	Journeyman	11	426	0	224	11	0	86	32	71	851
				28.46	*0.00*	*6.00*	*1.00*	*0.00*				*46.81*
Engineers, Project	LaborCost1	Journeyman	1,486	42,283	0	8,914	1,486	0	6,641	3,170	7,049	69,543
				22.97	*0.00*	*6.00*	*1.00*	*0.00*				*39.26*
Engineers, Quality Control	LaborCost1	Journeyman	2,476	56,878	0	14,857	2,476	0	9,260	4,264	9,482	97,217
				37.99	*0.00*	*16.95*	*1.00*	*0.00*				*76.95*
Equip. Operators, Heavy	LaborCost1	Journeyman	8,451	321,040	0	143,238	8,451	0	99,989	24,068	53,517	650,304
				35.46	*0.00*	*16.95*	*1.00*	*0.00*				*68.97*
Equip. Operators, Medium	LaborCost1	Journeyman	676	23,961	0	11,453	676	0	4,721	1,796	3,994	46,602
				30.69	*0.00*	*16.95*	*1.00*	*0.00*				*66.71*

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	LaborRate	LaborType	ManHours	BaseWage	Travel	TaxableFringe	NonTaxFringe	Subsistence	Payroll	WCI	Overtime	Total
Equip. Operators, Oilers / Grade Checker	LaborCost1	Journeyman	6,742	206,907	0	114,274	6,742	0	71,849	15,512	34,491	449,774
				36.49	*0.00*	*9.26*	*1.00*	*0.00*				*61.83*
General Superintendents (P.M.)	LaborCost1	Journeyman	8,914	325,282	0	82,546	8,914	0	55,775	24,386	54,225	551,128
				22.97	*0.00*	*6.00*	*1.00*	*0.00*				*39.26*
Inspectors	LaborCost1	Journeyman	2,476	56,878	0	14,857	2,476	0	9,260	4,264	9,482	97,217
				14.19	*0.00*	*3.24*	*1.00*	*0.00*				*24.12*
Janitors	LaborCost1	Journeyman	1,118	15,865	0	3,622	1,118	0	2,523	1,189	2,645	26,962
				29.66	*0.00*	*16.65*	*1.00*	*0.00*				*65.68*
Laborers, (Semi-Skilled)	LaborCost1	Journeyman	21,512	638,061	0	358,183	21,512	0	241,024	47,835	106,365	1,412,981
				30.66	*0.00*	*16.65*	*1.00*	*0.00*				*61.89*
Laborers, (Semi-Skilled)	LaborCost1	Foreman	821	25,176	0	13,672	821	0	5,069	1,887	4,197	50,822
				20.52	*0.00*	*3.24*	*1.00*	*0.00*				*32.82*
Office Managers	LaborCost1	Journeyman	4,457	91,461	0	14,441	4,457	0	13,813	6,857	15,246	146,275
				34.40	*0.00*	*19.64*	*1.00*	*0.00*				*70.17*
Rodmen, (Reinforcing)	LaborCost1	Journeyman	6	194	0	111	6	0	39	15	32	397
				13.70	*0.00*	*3.24*	*1.00*	*0.00*				*23.44*
Security, Watchmen/Guards	LaborCost1	Journeyman	4,457	61,063	0	14,441	4,457	0	9,770	4,578	10,179	104,488
				35.56	*0.00*	*14.30*	*1.00*	*0.00*				*65.81*
Truck Drivers, Light	LaborCost1	Journeyman	24	847	0	340	24	0	151	63	141	1,567
Surveyor Subcontractor												
				28.46	*0.00*	*6.00*	*1.00*	*0.00*				*47.08*
Field Engineers	LaborCost1	Journeyman	17	481	0	101	17	0	80	36	80	796
				34.40	*0.00*	*19.64*	*1.00*	*0.00*				*70.50*
Outside Rodmen	LaborCost1	Journeyman	17	582	0	332	17	0	121	44	97	1,192

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	LaborRate	LaborType	ManHours	BaseWage	Travel	TaxableFringe	NonTaxFringe	Subsistence	Payroll	WCI	Overtime	Total
				21.35	*0.00*	*6.00*	*1.00*	*0.00*				*37.24*
Surveyors	LaborCost1	Journeyman	17	361	0	101	17	0	63	27	60	630

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	CostType	ConditionType	Manufacturer	EQHours	Ownership	Operating	Total
Equipment by Contractor, Report				**37,075**	**1,196,295**	**3,205,392**	**4,401,687**
Prime Dredging Contractor				**37,075**	**1,196,295**	**3,205,392**	**4,401,687**
EP B25XX014 BUCKET, CLAMSHELL, 5.0 CY, SQUARE NOSE, STANDARD	EP	Average	XX NO SPECIFIC MANUFACTURER	2,248	*6.62* 14,874	*6.17* 13,868	*12.78* 28,742
EP B25XX019 BUCKET, CLAMSHELL, 7.5 CY, SQUARE NOSE, STANDARD	EP	Severe	XX NO SPECIFIC MANUFACTURER	546	*10.45* 5,703	*12.03* 6,565	*22.48* 12,268
EP C75TD008 CRANES, HYDRAULIC, SELF-PROPELLED, ROUGH TERRAIN, 65 TON, 180' BOOM, 4X4	EP	Average	TD TADANO AMERICA CORPORATION	367	*42.19* 15,474	*99.96* 36,662	*142.15* 52,136
EP H25CA030 HYDRAULIC EXCAVATOR, CRAWLER, 175,500 LBS, 5.00 CY BUCKET, 34.75' MAX DIGGING DEPTH	EP	Average	CA CATERPILLAR INC. (MACHINE DIVISION)	2,248	*62.19* 139,801	*139.65* 313,941	*201.83* 453,742
GEN B25Z1065 BUCKET, CLAMSHELL, 2.4 CY(1.8 M3) GENERAL PURPOSE, SQUARE NOSE (ADD TEETH WEAR COST)	EP	Average	ZZ GENERIC EQUIPMENT	207	*6.63* 1,373	*6.18* 1,280	*12.80* 2,652
GEN C85Z2398 CRANE, MECHANICAL, LATTICE BOOM, CRAWLER, DRAGLINE/CLAMSHELL, 2.5 CY (1.9 M3), 60 TON (54 MT), 50' (15.2 M) BOOM (ADD BUCKET)	EP	Standby	ZZ GENERIC EQUIPMENT	207	*31.93* 6,613	*0.00* 0	*31.93* 6,613
GEN L15Z4050 POST HOLE DRILL, UP TO 8" (203 MM) DIA, 30" (762 MM) DEEP, ONE MAN OPERATION	EP	Average	ZZ GENERIC EQUIPMENT	24	*0.26* 6	*1.23* 29	*1.49* 35
GEN T50Z7360 TRUCK, HIGHWAY, 20,000 LBS (9,000 KG) GVW, 2 AXLE, 4X2 WITH FLATBED	EP	Average	ZZ GENERIC EQUIPMENT	24	*3.74* 89	*34.62* 824	*38.36* 913
GEN XMEZ9520 CONCRETE VIBRATOR, 2.5" (63.5 MM) DIA, W/7.5 HP (5.6 KW) GENERATOR	Non-EP	Average	ZZ GENERIC EQUIPMENT	3	*0.62* 2	*3.53* 10	*4.15* 12
MAP C85MA003 CRANES, MECHANICAL, LATTICE BOOM, CRAWLER, DRAGLINE/CLAMSHELL, 7.0 CY, 140' BOOM (ADD BUCKET)	EP	Average	MA MANITOWOC ENGINEERING CO.	2,794	*99.53* 278,059	*171.22* 478,351	*270.75* 756,410

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	CostType	ConditionType	Manufacturer	EQHours	Ownership	Operating	Total
					1.77	*10.41*	*12.17*
MAP T50XX001 TRUCK, HIGHWAY, CONVENTIONAL, 1/2 TON PICKUP, 4X2	EP	Average	XX NO SPECIFIC MANUFACTURER	4,457	7,883	46,377	54,260
					2.53	*11.05*	*13.58*
MAP T50XX005 TRUCK, HIGHWAY, CONVENTIONAL, 3/4 TON PICKUP, 4X4	EP	Average	XX NO SPECIFIC MANUFACTURER	8,914	22,568	98,475	121,043
					66.65	*441.78*	*508.43*
USR XX0XX610 WORK TUG, 1000 HP 0	Non-EP	Average	ZZ GENERIC EQUIPMENT	1,711	114,024	755,794	869,817
					38.91	*0.00*	*38.91*
USR XX0XX610 WORK TUG, 1000 HP 0	Non-EP	Standby	ZZ GENERIC EQUIPMENT	1,533	59,659	0	59,659
					127.27	*808.46*	*935.73*
USR XX0XX630 TOWING VESSEL TUG, 3000 HP 0	Non-EP	Average	ZZ GENERIC EQUIPMENT	883	112,365	713,755	826,120
					42.48	*70.58*	*113.06*
USR XX0XX800 DUMP SCOW BARGE, 1,500 CY APPROX. 200'x 50' x 15'	Non-EP	Average	ZZ GENERIC EQUIPMENT	7,874	334,472	555,773	890,245
					27.73	*60.80*	*88.53*
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)	Non-EP	Average	ZZ GENERIC EQUIPMENT	3,001	83,225	182,454	265,680
Surveyor Subcontractor				**34**	**106**	**1,235**	**1,341**
					5.16	*72.41*	*77.57*
EP M10SM004 MARINE EQUIPMENT, BOATS & LAUNCHES, 23' LITTLE GIANT, W/CABIN TRI-HULL, CAP 3,400 LBS, OUTBOARD, 23.4' X 8.5' X 1.2'	EP	Average	SM SEAARK MARINE	17	87	1,225	1,312
					1.09	*0.61*	*1.70*
GEN XMEZ8815 LASER LEVEL FOR PIPES	Non-EP	Average	ZZ GENERIC EQUIPMENT	17	18	10	29

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

APPENDIX H
MCACES Construction Cost Estimate (NED Plan)

Valdez Small Boat Harbor
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN

This estimate includes the Federally Authorized GNF construction features as well as additional Local Services Facilities (LSF), which are to be funded solely by the local sponsors.

Estimated by	U.S. Army Corps of Engineers, Alaska District
Designed by	U.S. Army Corps of Engineers, Alaska District
Prepared by	Tetra Tech
Preparation Date	8/12/2010
Effective Date of Pricing	8/12/2010
Estimated Construction Time	870 Days

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Designed by
U.S. Army Corps of Engineers, Alaska District
Estimated by
U.S. Army Corps of Engineers, Alaska District
Prepared by
Tetra Tech

Design Document	Navigation Improvements Valdez, Alaska
Document Date	11/1/2007
District	Alaska
Contact	Bruce Sexauer
Budget Year	2011
UOM System	Original

Direct Costs
LaborCost
EQCost
MatlCost
SubBidCost
Travel/PerDiem
Shipping
Fees

Timeline/Currency

Preparation Date	8/12/2010
Escalation Date	8/12/2010
Eff. Pricing Date	8/12/2010
Estimated Duration	870 Day(s)
Currency	US dollars
Exchange Rate	1.000000

Costbook CB06MT: MII Metric Cost Book 2006

Labor LNS2009: Labor National - Seattle 2009

acon & Service (FOOH) Labor Rates!!!!! Fringes paid to the laborers are taxable. In a non-union job the whole fringes are taxable. In union job, the vacation pay fringes is taxabl

Labor Rates
LaborCost1
LaborCost2
LaborCost3
LaborCost4

Equipment EP07R09: MII Equipment Region 9r 2007

09 ALASKA

Sales Tax	0.00
Working Hours per Year	1,040
Labor Adjustment Factor	1.21
Cost of Money	5.25
Cost of Money Discount	25.00
Tire Recap Cost Factor	1.50
Tire Recap Wear Factor	1.80
Tire Repair Factor	0.15
Equipment Cost Factor	1.10
Standby Depreciation Factor	0.50

Fuel

Electricity	0.148
Gas	3.960
Diesel Off-Road	3.740
Diesel On-Road	4.080

Shipping Rates

Over 0 CWT	37.93
Over 240 CWT	37.12
Over 300 CWT	33.03
Over 400 CWT	29.12
Over 500 CWT	20.50
Over 700 CWT	18.63
Over 800 CWT	15.34

Labor ID: LNS2009 EQ ID: EP07R09 | Currency in US dollars | TRACES MII Version 4.0

Direct Cost Markups **Category** **Method**

Productivity Productivity Productivity

Overtime Overtime Overtime

	Days/Week	Hours/Shift	Shifts/Day	1st Shift	2nd Shift	3rd Shift
Standard	*5.00*	*8.00*	*1.00*	*8.00*	*0.00*	*0.00*
Actual	*6.00*	*8.00*	*1.00*	*10.00*	*0.00*	*0.00*

Day	OT Factor	Working	OT Percent	FCCM Percent
Monday	*1.50*	*Yes*	*16.67*	*(33.33)*
Tuesday	*1.50*	*Yes*		
Wednesday	*1.50*	*Yes*		
Thursday	*1.50*	*Yes*		
Friday	*1.50*	*Yes*		
Saturday	*1.50*	*Yes*		
Sunday	*2.00*	*No*		

Overtime Dredge Overtime Overtime

	Days/Week	Hours/Shift	Shifts/Day	1st Shift	2nd Shift	3rd Shift
Standard	*5.00*	*8.00*	*2.00*	*8.00*	*8.00*	*0.00*
Actual	*6.00*	*8.00*	*2.00*	*10.00*	*10.00*	*0.00*

Day	OT Factor	Working	OT Percent	FCCM Percent
Monday	*1.50*	*Yes*	*16.67*	*(66.67)*
Tuesday	*1.50*	*Yes*		
Wednesday	*1.50*	*Yes*		
Thursday	*1.50*	*Yes*		
Friday	*1.50*	*Yes*		
Saturday	*1.50*	*Yes*		
Sunday	*2.00*	*No*		

Overtime Breakwater Overtime Overtime

	Days/Week	Hours/Shift	Shifts/Day	1st Shift	2nd Shift	3rd Shift
Standard	*5.00*	*8.00*	*1.00*	*8.00*	*0.00*	*0.00*
Actual	*6.00*	*8.00*	*1.00*	*10.00*	*0.00*	*0.00*

Day	OT Factor	Working	OT Percent	FCCM Percent
Monday	*1.50*	*Yes*	*16.67*	*(33.33)*
Tuesday	*1.50*	*Yes*		
Wednesday	*1.50*	*Yes*		
Thursday	*1.50*	*Yes*		
Friday	*1.50*	*Yes*		
Saturday	*1.50*	*Yes*		
Sunday	*2.00*	*No*		

Sales Tax TaxAdj Running % on Selected Costs

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

MatlCost

Contractor Markups	Category	Method
JOOH (Small Tools)	JOOH	% of Labor
JOOH	JOOH	JOOH (Calculated)
HOOH	HOOH	Running %
Profit	Profit	Profit Weighted Guidelines

Guideline	*Value*	*Weight*	*Percentage*
Risk	*0.100*	*20*	*2.00*
Difficulty	*0.100*	*15*	*1.50*
Size	*0.030*	*15*	*0.45*
Period	*0.120*	*15*	*1.80*
Invest (Contractor's)	*0.100*	*5*	*0.50*
Assist (Assistance by)	*0.070*	*5*	*0.35*
SubContracting	*0.092*	*25*	*2.30*
Total		*100*	*8.90*

JOOH Sub	JOOH	Running %
HOOH Sub	HOOH	Running %
Profit Sub	Profit	Direct %
Bond	Bond	Bond Table

Class B, Tiered, 24 months, 1.00% Surcharge

Contract Price	*Bond Rate*
500,000	*15.84*
2,000,000	*9.57*
2,500,000	*7.59*
2,500,000	*6.93*
100,000,000,000	*6.34*

Excise Tax	Excise	Running %

Currency in US dollars

Description	Quantity	UOM	ContractCost	ProjectCost	C/O
Project Cost Summary Report			**46,232,873**	**46,232,873**	
01 Lands and Damages	**1.00**	**LS**	**334,800**	**334,800**	
			334,800.00	*334,800.00*	
0101 Lands and Damages	**1.00**	**EA**	**334,800**	**334,800**	
02 Relocations	**1.00**	**LS**	**2,651,059**	**2,651,059**	
0202 Mob, Demob & Preparatory Work	**1.00**	**LS**	**1,982,776**	**1,982,776**	
0202 01 Mobilization	**1.00**	**LS**	**1,012,566**	**1,012,566**	
0202 02 Preparation Work	**1.00**	**LS**	**116,362**	**116,362**	
0202 03 Demobilization	**1.00**	**LS**	**853,848**	**853,848**	
0203 Utilities	**1.00**	**LS**	**668,283**	**668,283**	
0203 02 Fiber Optic Line	**1.00**	**LS**	**668,283**	**668,283**	
10 Breakwaters and Seawalls	**1.00**	**LS**	**11,744,694**	**11,744,694**	
1000 Breakwaters & Seawalls	**1.00**	**LS**	**11,744,694**	**11,744,694**	
1000 01 Stub Breakwater	**1.00**	**LS**	**220,251**	**220,251**	
1000 02 South Main Breakwater	**1.00**	**LS**	**7,184,472**	**7,184,472**	
1000 03 East Main Breakwater	**1.00**	**LS**	**4,333,862**	**4,333,862**	
1000 04 Navigation Aid Foundation	**1.00**	**LS**	**6,109**	**6,109**	
12 Navigation Ports & Harbors	**1.00**	**LS**	**26,838,648**	**26,838,648**	
1202 Harbors	**1.00**	**LS**	**26,838,648**	**26,838,648**	
1202 01 Dredging and Disposal	**1.00**	**LS**	**5,149,979**	**5,149,979**	
			2,214,368.13	*2,214,368.13*	
1202 01 00 Dredging	**1.00**	**EA**	**2,214,368**	**2,214,368**	
			2,152,592.32	*2,152,592.32*	
1202 01 01 Disposal Two Moon Bay	**1.00**	**EA**	**2,152,592**	**2,152,592**	
			783,018.61	*783,018.61*	
1202 01 05 Disposal Fast Land	**1.00**	**EA**	**783,019**	**783,019**	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	ContractCost	ProjectCost	C/O
1202 02 Hydro Surveys (Harbor Improvements)	**1.00**	**LS**	**142,983**	**142,983**	
1202 03 Hydro Surveys (Disposal Site)	**1.00**	**LS**	**86,043**	**86,043**	
			86,042.72	*86,042.72*	
1202 03 01 Hydro Surveys Disposal Alternative 1	**1.00**	**EA**	**86,043**	**86,043**	
1202 04 Inner Harbor Floats and Facilities	**1.00**	**LS**	**21,459,642**	**21,459,642**	
16 Bank Stabilization	**1.00**	**LS**	**2,263,672**	**2,263,672**	
1600 Bank Stabilization	**1.00**	**LS**	**2,263,672**	**2,263,672**	
1600 01 North Harbor Slope Protection	**1.00**	**LS**	**657,864**	**657,864**	
1600 02 North Harbor Area Fast Land	**1.00**	**LS**	**635,385**	**635,385**	
1600 03 Basin Slope Protection	**1.00**	**LS**	**970,424**	**970,424**	
			950,000.00	*950,000.00*	
30 Planning, Engineering and Design	**1.00**	**EA**	**950,000**	**950,000**	
			950,000.00	*950,000.00*	
3001 Planning, Engineering and Design	**1.00**	**EA**	**950,000**	**950,000**	
			1,450,000.00	*1,450,000.00*	
31 Construction Management	**1.00**	**EA**	**1,450,000**	**1,450,000**	
			1,450,000.00	*1,450,000.00*	
3101 Construction Management	**1.00**	**EA**	**1,450,000**	**1,450,000**	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	Contractor	DirectCost	SubCMU	CostToPrime	PrimeCMU	ContractCost	C/O
Contract Cost Summary Report				**29,091,947**	**4,140,406**	**30,497,553**	**13,000,520**	**46,232,873**	
01 Lands and Damages	**1.00**	**LS**		**334,800**	**0**	**0**	**0**	**334,800**	
				334,800.00		*0.00*		*334,800.00*	
0101 Lands and Damages	**1.00**	**EA**		**334,800**	**0**	**0**	**0**	**334,800**	
02 Relocations	**1.00**	**LS**	**Utility Subcontractor**	**1,403,051**	**455,671**	**1,858,722**	**792,337**	**2,651,059**	
0202 Mob, Demob & Preparatory Work	**1.00**	**LS**	**Utility Subcontractor**	**1,049,368**	**340,804**	**1,390,172**	**592,604**	**1,982,776**	
0202 01 Mobilization	**1.00**	**LS**	**Utility Subcontractor**	**535,892**	**174,042**	**709,935**	**302,631**	**1,012,566**	
0202 02 Preparation Work	**1.00**	**LS**	**Utility Subcontractor**	**61,583**	**20,001**	**81,584**	**34,778**	**116,362**	
0202 03 Demobilization	**1.00**	**LS**	**Utility Subcontractor**	**451,892**	**146,762**	**598,654**	**255,195**	**853,848**	
0203 Utilities	**1.00**	**LS**	**Utility Subcontractor**	**353,684**	**114,866**	**468,550**	**199,734**	**668,283**	
0203 02 Fiber Optic Line	**1.00**	**LS**	**Utility Subcontractor**	**353,684**	**114,866**	**468,550**	**199,734**	**668,283**	
10 Breakwaters and Seawalls	**1.00**	**LS**	**Prime Dredging Contractor**	**8,234,489**	**0**	**8,234,489**	**3,510,204**	**11,744,694**	
1000 Breakwaters & Seawalls	**1.00**	**LS**	**Prime Dredging Contractor**	**8,234,489**	**0**	**8,234,489**	**3,510,204**	**11,744,694**	
1000 01 Stub Breakwater	**1.00**	**LS**	**Prime Dredging Contractor**	**154,423**	**0**	**154,423**	**65,828**	**220,251**	
1000 02 South Main Breakwater	**1.00**	**LS**	**Prime Dredging Contractor**	**5,037,208**	**0**	**5,037,208**	**2,147,265**	**7,184,472**	
1000 03 East Main Breakwater	**1.00**	**LS**	**Prime Dredging Contractor**	**3,038,576**	**0**	**3,038,576**	**1,295,286**	**4,333,862**	
1000 04 Navigation Aid Foundation	**1.00**	**LS**	**Prime Dredging Contractor**	**4,283**	**0**	**4,283**	**1,826**	**6,109**	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	Contractor	DirectCost	SubCMU	CostToPrime	PrimeCMU	ContractCost	C/O
12 Navigation Ports & Harbors	**1.00**	**LS**	**Prime Dredging Contractor**	**15,132,490**	**3,684,736**	**18,817,226**	**8,021,421**	**26,838,648**	
1202 Harbors	**1.00**	**LS**	**Prime Dredging Contractor**	**15,132,490**	**3,684,736**	**18,817,226**	**8,021,421**	**26,838,648**	
1202 01 Dredging and Disposal	**1.00**	**LS**	**Prime Dredging Contractor**	**3,610,775**	**0**	**3,610,775**	**1,539,204**	**5,149,979**	
1202 02 Hydro Surveys (Harbor Improvements)	**1.00**	**LS**	**Surveyor Subcontractor**	**75,333**	**24,916**	**100,249**	**42,734**	**142,983**	
1202 03 Hydro Surveys (Disposal Site)	**1.00**	**LS**	**Surveyor Subcontractor**	**45,333**	**14,994**	**60,327**	**25,716**	**86,043**	
1202 04 Inner Harbor Floats and Facilities	**1.00**	**LS**	**Harbor Subcontractor**	**11,401,050**	**3,644,826**	**15,045,875**	**6,413,767**	**21,459,642**	
16 Bank Stabilization	**1.00**	**LS**	**Prime Dredging Contractor**	**1,587,116**	**0**	**1,587,116**	**676,557**	**2,263,672**	
1600 Bank Stabilization	**1.00**	**LS**	**Prime Dredging Contractor**	**1,587,116**	**0**	**1,587,116**	**676,557**	**2,263,672**	
1600 01 North Harbor Slope Protection	**1.00**	**LS**	**Prime Dredging Contractor**	**461,244**	**0**	**461,244**	**196,620**	**657,864**	
1600 02 North Harbor Area Fast Land	**1.00**	**LS**	**Prime Dredging Contractor**	**445,484**	**0**	**445,484**	**189,901**	**635,385**	
1600 03 Basin Slope Protection	**1.00**	**LS**	**Prime Dredging Contractor**	**680,388**	**0**	**680,388**	**290,036**	**970,424**	
				950,000.00		*0.00*		*950,000.00*	
30 Planning, Engineering and Design	**1.00**	**EA**		**950,000**	**0**	**0**	**0**	**950,000**	
				950,000.00		*0.00*		*950,000.00*	
3001 Planning, Engineering and Design	**1.00**	**EA**		**950,000**	**0**	**0**	**0**	**950,000**	
				1,450,000.00		*0.00*		*1,450,000.00*	
31 Construction Management	**1.00**	**EA**		**1,450,000**	**0**	**0**	**0**	**1,450,000**	
				1,450,000.00		*0.00*		*1,450,000.00*	
3101 Construction Management	**1.00**	**EA**		**1,450,000**	**0**	**0**	**0**	**1,450,000**	

Currency in US dollars

Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
Project Direct Costs Report				**6,648,307**	**6,380,626**	**11,914,139**	**4,148,875**	**0**	**29,091,947**	
01 Lands and Damages	**1.00**	**LS**		**0**	**0**	**0**	**334,800**	**0**	**334,800**	
				0.00	*0.00*	*0.00*	*334,800.00*		*334,800.00*	
0101 Lands and Damages	**1.00**	**EA**		**0**	**0**	**0**	**334,800**	**0**	**334,800**	
				0.00	*0.00*	*0.00*	*334,800.00*		*334,800.00*	
USR Land and Damages	1.00	EA		0	0	0	334,800	0	334,800	

(Note: Lands and Damages: This account covers the cost for Lands and Damages for construction. The cost for this account was provided by Linda Arrington, of the Alaska District. A Real Estate Draft Report was prepared by the District in March 2007. The Federal portion due to administration was $32,000. The Non-Federal Projects Portion was $42,000 due to administration and $147,500 due to payments for Real Estate. The Total Real Estate Costs was $221,500 in August 1997 dollars (without contingency). This amount has been escalated from 4Q97 to 3Q10 using the CWCCIS tables (composite) from 31 Mar 2010, which gives a Total Real Estate Cost of $334,800 to be used in the estimate.)

02 Relocations	**1.00**	**LS**	**Utility Subcontractor**	**362,713**	**943,907**	**2,156**	**94,275**	**0**	**1,403,051**	

(Note: Fiber Optic Relocation A new Fiber Optic Cable line will be constructed from the existing manhole along the perimeter of the harbor project placing two 4-inch conduits to the point where the cable would enter the water along the perimeter of the new harbor breakwater. A detailed cost estimate was provided by the utility company GCI and incorporated into this MII estimate.)

0202 Mob, Demob & Preparatory Work	**1.00**	**LS**	**Utility Subcontractor**	**188,386**	**766,707**	**0**	**94,275**	**0**	**1,049,368**	

(Note: It is assumed that the Prime Contractor will be from the Seattle area. The Contractor will mob/demob the barge equipment and highly skilled staff from the Seattle area and the floating crane from Anchorage. Other construction equipment and skilled labor are assumed to be available in the Valdez area.)

0202 01 Mobilization	**1.00**	**LS**	**Utility Subcontractor**	**64,539**	**383,354**	**0**	**88,000**	**0**	**535,892**	
				27.29	*162.09*	*0.00*	*0.00*		*189.38*	
USR Utility Mob/Demob Utility Mobilization/Demobilization	2,365.00	KM	Utility Subcontractor	64,539	383,354	0	0	0	447,892	

(Note: The Utility Contractor will mob/demob a splicing crew and barge from the Seattle area which is approximately 2,365km distance.)

				0.00	*0.00*	*0.00*	*16,000.00*		*16,000.00*	
USR Personnel Lodging for 3 months	5.00	EA	Utility Subcontractor	0	0	0	80,000	0	80,000	

(Note: The Utility Contractor will mob/demob 5 highly skilled staff from the Seattle area. It is assumed that lodging per diem in Valdez will be $200 per person. Cost: $200 x 80 days = $16,000 per person.)

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
				0.00	*0.00*	*0.00*	*800.00*		*800.00*	
USR Personnel Travel and Air Fare	10.00	EA	Utility Subcontractor	0	0	0	8,000	0	8,000	
(Note: The Utility Contractor will mob/demob 5 highly skilled staff from the Seattle area. It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person. Each person will fly back to Seattle 2 times per year over the 1 year relocation duration. Quantity of roundtrips is 5 x 2 x 1 = 10)										
0202 02 Preparation Work	**1.00**	**LS**	**Utility Subcontractor**	**59,308**	**0**	**0**	**2,275**	**0**	**61,583**	
				0.00	*0.00*	*0.00*	*2,275.00*		*2,275.00*	
HTW 019102004301 Temp. Construction Facilities, contractor personnel, 2400mm x 11m	1.00	EA	Utility Subcontractor	0	0	0	2,275	0	2,275	
				31.49	*0.00*	*0.00*	*0.00*		*31.49*	
HNC FB-CLTYP Clerks, Typists, Bookkeepers & Receptionist	160.00	HR	Utility Subcontractor	5,038	0	0	0	0	5,038	
(Note: The Utility Contractor require an Admin Assistant to prepare the designs permits and submittals (160hrs).)										
				93.69	*0.00*	*0.00*	*0.00*		*93.69*	
HNC FC-ENELC Engineers, Electrical	300.00	HR	Utility Subcontractor	28,108	0	0	0	0	28,108	
(Note: The Utility Contractor require an Electrical Engineer to prepare the designs permits and submittals (160hrs).)										
				64.32	*0.00*	*0.00*	*0.00*		*64.32*	
HNC FC-SURYC Surveyors, Chief	160.00	HR	Utility Subcontractor	10,290	0	0	0	0	10,290	
(Note: The Utility Contractor require Surveyor to prepare the survey and easement acquisitions (160hrs).)										
				52.91	*0.00*	*0.00*	*0.00*		*52.91*	
HNC FC-SURYR Surveyors	300.00	HR	Utility Subcontractor	15,872	0	0	0	0	15,872	
(Note: The Utility Contractor require Surveyor to prepare the survey and easement acquisitions (300hrs).)										
0202 03 Demobilization	**1.00**	**LS**	**Utility Subcontractor**	**64,539**	**383,354**	**0**	**4,000**	**0**	**451,892**	
				27.29	*162.09*	*0.00*	*0.00*		*189.38*	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
USR Utility Mob/Demob Utility Mobilization/Demobilization	2,365.00	KM	Utility Subcontractor	64,539	383,354	0	0	0	447,892	
(Note: The Utility Contractor will mob/demob a splicing crew and barge from the Seattle area which is approximately 2,365km distance.)										
				0.00	*0.00*	*0.00*	*800.00*		*800.00*	
USR Personnel Travel and Air Fare	5.00	EA	Utility Subcontractor	0	0	0	4,000	0	4,000	
(Note: The Utility Contractor will mob/demob 5 highly skilled staff from the Seattle area. It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person.)										
0203 Utilities	**1.00**	**LS**	**Utility Subcontractor**	**174,327**	**177,200**	**2,156**	**0**	**0**	**353,684**	
0203 02 Fiber Optic Line	**1.00**	**LS**	**Utility Subcontractor**	**174,327**	**177,200**	**2,156**	**0**	**0**	**353,684**	
(Note: A new Fiber Optic Cable line will be constructed from the existing manhole along the perimeter of the harbor project placing two 4-inch conduits to the point where the cable would enter the water along the perimeter of the new harbor breakwater. Then a splicing crew and barge mobilized from the Seattle area will pull the cable into conduit and lay to the intercept point of the existing cable south of the South Main Breakwater. The crew will locate the existing cable and unbury and remove armor protectors to allow recovery, cut the cable, recover the end and conduct the splice with the new cable set into the conduit to manhole, lay down the splice, place armor protectors on from end of conduit to safe distance from harbor construction site and finally jet bury the cable to protect from construction activities.)										
				324.84	*331.22*	*2.43*	*0.00*		*658.49*	
USR Fiber optics cable Installation: Fiber optics cable	535.00	M	Utility Subcontractor	173,791	177,200	1,300	0	0	352,291	
(Note: The crew has been modified to include an excavator, barge equipment, underwater divers and operators. The crew output has also been modified to account for the low productivity with this type of construction.)										
				134.11	*0.00*	*214.00*	*0.00*		*348.11*	
RSM 167104001500 Fiber optics cable enclosure, splice w/enclosure encapsulant	4.00	EA	Utility Subcontractor	536	0	856	0	0	1,392	
10 Breakwaters and Seawalls	**1.00**	**LS**	**Prime Dredging Contractor**	**1,470,542**	**2,296,101**	**4,467,846**	**0**	**0**	**8,234,489**	
1000 Breakwaters & Seawalls	**1.00**	**LS**	**Prime Dredging Contractor**	**1,470,542**	**2,296,101**	**4,467,846**	**0**	**0**	**8,234,489**	

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
(Note: Three breakwaters will be constructed to protect the harbor. The south main breakwater will be approximately 473 m long. The east main breakwater will be approximately 240 m long. And just to the west of the south main breakwater will be a 29 m long stub breakwater. Breakwater construction productivity is based on data given by Manson Construction (206-762-0850) for placing Armor Rock at a production rate of 100ton/hr which is equivalent to 48cu m/hr assuming 1.6ton/cy. The production rates for the secondary rock and core rock were adjusted up to 67cu m/hr and 109cu m/hr respectively based on bucket void ratio and ease of placement. Assume breakwater construction will progress with one 12 hour shift per day, 6 days a week for overtime calculation. Equipment costs for the dredge barge were increased by a factor of 10 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)										
1000 01 Stub Breakwater	**1.00**	**LS**	**Prime Dredging Contractor**	**27,093**	**42,379**	**84,950**	**0**	**0**	**154,423**	
(Note: The stub breakwater will be approximately 29 m long and include approximately 230 cu m of Core Rock, 520 cu m of Secondary Rock, and 650 cu m of Armor Rock. The rock will be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.)										
				9.21	*14.40*	*26.00*	*0.00*		*49.61*	
USR Core Rock Place core rock (2.2kg - 91kg) with 3.8 cubic meter (cu m) clamshell bucket	276.00	LM3	Prime Dredging Contractor	2,541	3,974	7,176	0	0	13,691	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez, Alaska (907-835-4756) $26.00/cu m delivered to project site; Quantity: 230cu m x 20% for overplace and loss = 276cu m; Productivity: Based on crew output rate for core rock placement.)										
				14.98	*23.43*	*52.34*	*0.00*		*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	598.00	LM3	Prime Dredging Contractor	8,956	14,009	31,299	0	0	54,264	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 520cu m x 15% for overplace and loss = 598cu m; Productivity: Based on crew output rate for secondary rock placement.)										
				21.81	*34.12*	*65.00*	*0.00*		*120.93*	
USR Armor Rock Place armor rock (1016kg - 1690kg) with 3.8 cubic meter (cu m) clamshell bucket	715.00	LM3	Prime Dredging Contractor	15,597	24,396	46,475	0	0	86,468	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $65.00/cu m delivered to project site; Quantity: 650cu m x 10% for overplace and loss = 715cu m; Productivity: Based on crew output rate for armor rock placement.)										
1000 02 South Main Breakwater	**1.00**	**LS**	**Prime Dredging Contractor**	**900,311**	**1,408,254**	**2,728,643**	**0**	**0**	**5,037,208**	

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
(Note: The south main breakwater will be approximately 473 m long and include approximately 25,750 cu m of Core Rock, 10,160 cu m of Secondary Rock, and 18,370 cu m of Armor Rock. The rock will be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.)										
				9.21	*14.40*	*26.00*	*0.00*		*49.61*	
USR Core Rock Place core rock (2.2kg - 91kg) with 3.8 cubic meter (cu m) clamshell bucket	30,900.00	LM3	Prime Dredging Contractor	284,457	444,944	803,400	0	0	1,532,802	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez, Alaska (907-835-4756) $26.00/cu m delivered to project site; Quantity: 25,750cu m x 20% for overplace and loss = 30,900cu m; Based on crew output rate for core rock placement.)										
				14.98	*23.43*	*52.34*	*0.00*		*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	11,685.00	LM3	Prime Dredging Contractor	175,000	273,733	611,593	0	0	1,060,327	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 10,160cu m x 15% for overplace and loss = 11,685cu m; Productivity: Based on crew output rate for secondary rock placement.)										
				21.81	*34.12*	*65.00*	*0.00*		*120.93*	
USR Armor Rock Place armor rock (1016kg - 1690kg) with 3.8 cubic meter (cu m) clamshell bucket	20,210.00	LM3	Prime Dredging Contractor	440,853	689,576	1,313,650	0	0	2,444,079	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $65.00/cu m delivered to project site; Quantity: 18,370cu m x 10% for overplace and loss = 20,210cu m; Productivity: Based on crew output rate for armor rock placement.)										
1000 03 East Main Breakwater	**1.00**	**LS**	**Prime Dredging Contractor**	**540,509**	**845,456**	**1,652,611**	**0**	**0**	**3,038,576**	
(Note: The east main breakwater will be approximately 240 m long and include approximately 11,590 cu m of Core Rock, 6,980 cu m of Secondary Rock, and 12,180 cu m of Armor Rock. The rock will be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.)										
				9.21	*14.40*	*26.00*	*0.00*		*49.61*	
USR Core Rock Place core rock (2.2kg - 91kg) with 3.8 cubic meter (cu m) clamshell bucket	13,908.00	LM3	Prime Dredging Contractor	128,033	200,268	361,608	0	0	689,910	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez, Alaska (907-835-4756) $26.00/cu m delivered to project site; Quantity: 11,590cu m x 20% for overplace and loss = 13,908cu m; Based on crew output rate for core rock placement.)										

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
				14.98	*23.43*	*52.34*	*0.00*		*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	8,027.00	LM3	Prime Dredging Contractor	120,216	188,041	420,133	0	0	728,390	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 6,980cu m x 15% for overplace and loss = 8,027cu m; Productivity: Based on crew output rate for secondary rock placement.)										
				21.81	*34.12*	*65.00*	*0.00*		*120.93*	
USR Armor Rock Place armor rock (1016kg - 1690kg) with 3.8 cubic meter (cu m) clamshell bucket	13,398.00	LM3	Prime Dredging Contractor	292,259	457,147	870,870	0	0	1,620,276	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $65.00/cu m delivered to project site; Quantity: 12,180cu m x 10% for overplace and loss = 13,398cu m; Productivity: Based on crew output rate for armor rock placement.)										
1000 04 Navigation Aid Foundation	**1.00**	**LS**	**Prime Dredging Contractor**	**2,629**	**12**	**1,642**	**0**	**0**	**4,283**	
(Note: Two navigation aid foundations will be constructed on top of the breakwaters near the entrance channel. The foundations will each be 2m x 2m x 0.6m in dimension. The Coast Guard will provide the navigation markers and attachment hardware seperately.)										
				365.20	*1.63*	*228.00*	*0.00*		*594.84*	
RSM 033102403800 Structural concrete, in place, spread footing, includes forms(4 uses), reinforcing steel, and finishing	7.20	M3	Prime Dredging Contractor	2,629	12	1,642	0	0	4,283	
(Note: Quantity: (2) 2m x 2m x 0.6m x 50% for overplace and loss = 7.2cu m)										
12 Navigation Ports & Harbors	**1.00**	**LS**	**Prime Dredging Contractor**	**4,416,523**	**2,610,520**	**6,785,648**	**1,319,800**	**0**	**15,132,490**	
1202 Harbors	**1.00**	**LS**	**Prime Dredging Contractor**	**4,416,523**	**2,610,520**	**6,785,648**	**1,319,800**	**0**	**15,132,490**	
(Note: The harbor basin would be approximately 435 m by 130 m and dredged to MLLW depths varying from -5.5 m at the entrance to -4 m in the center and to -2.7 m at the west end as the length and draft of the vessels dictate.)										

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
1202 01 Dredging and Disposal	**1.00**	**LS**	**Prime Dredging Contractor**	**1,616,612**	**1,994,163**	**0**	**0**	**0**	**3,610,775**	
(Note: A total of approximately 186,410 cubic meters of dredging would be required for the entrance channel, maneuvering channel and basin. The dredged material will be used to create fast land and the remainder disposed of at Two Moon Bay, Alaska, which is approximately 48km from the project site (96km round trip).)										
				760,203.09	*792,344.08*	*0.00*	*0.00*		*1,552,547.17*	
1202 01 00 Dredging	**1.00**	**EA**	**Prime Dredging Contractor**	**760,203**	**792,344**	**0**	**0**	**0**	**1,552,547**	
				3.96	*4.13*	*0.00*	*0.00*		*8.09*	
USR Dredge Dredging, barge mounted 7.6 cubic meter (cm) clamshell bucket excavation into dump scow barge	192,000.00	BM3	Prime Dredging Contractor	760,203	792,344	0	0	0	1,552,547	
(Note: Quantity: 186,410cu m x 3% overdredge = 192,000cu m; Productivity is based on data given by Manson Construction (206-762-0850) for dredging at a production rate of 5400cy/24hr which is equivalent to 172cu m/hr, this rate was adjusted based on using a 7.6cu m bucket to 186cu m/hr. Productivity: Based on crew output rate for harbor dredging. - Assume dredging will progress with two 10 hour shifts per day, 6 days a week for overtime calculation; Cost: Equipment costs for the dredge barge were increased by a factor of 10 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)										
				547,414.10	*961,820.55*	*0.00*	*0.00*		*1,509,234.65*	
1202 01 01 Disposal Two Moon Bay	**1.00**	**EA**	**Prime Dredging Contractor**	**547,414**	**961,821**	**0**	**0**	**0**	**1,509,235**	
(Note: Scow Dumping)										
				3.81	*6.69*	*0.00*	*0.00*		*10.51*	
USR Dump Scow - Two Moon Bay Dump Scow Barges & Tug	143,664.00	LM3	Prime Dredging Contractor	547,414	961,821	0	0	0	1,509,235	
(Note: Quantity: 119,720cu m x 20% swell factor = 143,664cu m; Productivity: 2 dump scows x 1150cu m / [(96km / 5knots) + 2hrs] = 186cu m/hr; Cost: Equipment costs for the dump scow barge and tug were increased by a factor of 2 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)										
				308,995.13	*239,998.20*	*0.00*	*0.00*		*548,993.33*	
1202 01 05 Disposal Fast Land	**1.00**	**EA**	**Prime Dredging Contractor**	**308,995**	**239,998**	**0**	**0**	**0**	**548,993**	

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
				0.65	*1.14*	*0.00*	*0.00*		*1.79*	
USR Dump Scow - Fast Land Dump Scow Barges & Tug	86,736.00	LM3	Prime Dredging Contractor	56,397	99,090	0	0	0	155,487	
(Note: Quantity: (41,610cu m + 30,670cu m) x 20% swell factor = 86,736cu m; Productivity: 2 dump scows x 1150cu m / [(0.5km / 5knots) + 1hrs] = 1090cu m/hr; Cost: Equipment costs for the dump scow barge and tug were increased by a factor of 2 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)										
				2.91	*1.62*	*0.00*	*0.00*		*4.54*	
USR Fast Land Fast Land Off Loading	86,736.00	LM3	Prime Dredging Contractor	252,598	140,908	0	0	0	393,506	
(Note: Quantity: 72,280cu m x 20% swell factor = 86,736cu m; Assumes dredged material would be placed into skip buckets on the dump scow and transported to the fast land site to be off loaded by crane.)										
1202 02 Hydro Surveys (Harbor Improvements)	**1.00**	**LS**	**Surveyor Subcontractor**	**3,520**	**1,813**	**0**	**70,000**	**0**	**75,333**	
(Note: The total small boat harbor improvement area is approximately 6.56 hectares (16.2 acres). The improvement area will be surveyed once prior to construction and then again after all improvements have been completed.)										
				0.00	*0.00*	*0.00*	*35,000.00*		*35,000.00*	
USR Survey Mapping Survey Mapping	2.00	EA	Surveyor Subcontractor	0	0	0	70,000	0	70,000	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the hydro survey mapping can be processed for approximately $35,000 each time.)										
				1,760.12	*906.27*	*0.00*	*0.00*		*2,666.40*	
USR Hydro Surveys Hydro Surveying, 3 person crew with boat	2.00	DAY	Surveyor Subcontractor	3,520	1,813	0	0	0	5,333	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the boat crew can obtain the data in 1 day. Since 2 surveys are required the total quantity is 2 days.)										
1202 03 Hydro Surveys (Disposal Site)	**1.00**	**LS**	**Surveyor Subcontractor**	**3,520**	**1,813**	**0**	**40,000**	**0**	**45,333**	
(Note: The disposal site area is approximately 8.3 hectares (20.0 acres). The disposal area will be surveyed once prior to dumping the dredge material and then again at completion.)										
				3,520.25	*1,812.55*	*0.00*	*40,000.00*		*45,332.80*	
1202 03 01 Hydro Surveys Disposal Alternative 1	**1.00**	**EA**	**Surveyor Subcontractor**	**3,520**	**1,813**	**0**	**40,000**	**0**	**45,333**	
				0.00	*0.00*	*0.00*	*20,000.00*		*20,000.00*	
USR Survey Mapping Survey Mapping	2.00	EA	Surveyor Subcontractor	0	0	0	40,000	0	40,000	

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the hydro survey mapping can be processed for approximately $20,000 each time.)										
				1,760.12	*906.27*	*0.00*	*0.00*		*2,666.40*	
USR Hydro Surveys Hydro Surveying, 3 person crew with boat	2.00	DAY	Surveyor Subcontractor	3,520	1,813	0	0	0	5,333	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the boat crew can obtain the data in 1 day. Since 2 surveys are required the total quantity is 2 days.)										
1202 04 Inner Harbor Floats and Facilities	**1.00**	**LS**	**Harbor Subcontractor**	**2,792,870**	**612,732**	**6,785,648**	**1,209,800**	**0**	**11,401,050**	
(Note: The Inner Harbor Floats and Facilities quantities for this project have been calculated based on drawing measurements for 320 vessels and scaled up quantity data from the City of Valdez Small Boat Harbor D and E Float Replacement designed by TNH Inc., Sept. 2006.)										
				75.07	*55.50*	*250.00*	*0.00*		*380.57*	
Steel Piles Steel Piles, furnished, barge driven, 15 m long, by tug boat, excludes mobilization	4,267.00	M	Harbor Subcontractor	320,316	236,833	1,066,750	0	0	1,623,899	
(Note: Material Cost: Adjusted based on material cost construction bid from the City of Valdez Small Boat Harbor D and E Float Replacement; Productivity: Based on crew output for pile driving.)										
				284.43	*60.90*	*862.00*	*130.00*		*1,337.32*	
RSM 023903400500 Docks, floating, small boat, prefabricated, no shore facilities, excludes pilings	5,460.00	M2	Harbor Subcontractor	1,552,972	332,494	4,706,520	709,800	0	7,301,786	
(Note: Material Cost: based on quote provided by PND Engineers (John O., 253-383-2740); Delivery Cost: based on quote provided by Alaska Marine Lines of $130/M2 (800-326-8346).)										
				103.04	*0.00*	*580.00*	*0.00*		*683.04*	
RSM 023903102040 Dock accessories, mooring whip, fiberglass, bolted to dock	640.00	PR	Harbor Subcontractor	65,945	0	371,200	0	0	437,145	
				707.10	*0.00*	*905.00*	*0.00*		*1,612.10*	
RSM 131110501120 Anodes, graphite type with epoxy cap, 36kg, 150mm x 1800mmm	280.00	EA	Harbor Subcontractor	197,989	0	253,400	0	0	451,389	
				530.21	*0.00*	*600.00*	*0.00*		*1,130.21*	

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
RSM 023903101060 Dock accessories, electrical receptacle with circuit breaker, pile mounted, double, 50 amp, 125/240 volt	320.00	EA	Harbor Subcontractor	169,668	0	192,000	0	0	361,668	
				130.22	*0.00*	*12.95*	*0.00*		*143.17*	
RSM 025307703040 Piping, drainage and sewage, HDPE Corrugated Type S with watertight gaskets, 200 mm diameter, excludes excavation or backfill	1,090.00	M	Harbor Subcontractor	141,944	0	14,116	0	0	156,060	
(Note: Productivity: Adusted from 14.5m/hr to 2m/hr due to installation underneath the floats in the water.)										
				52,048.52	*11,513.27*	*129,000.00*	*0.00*		*192,561.78*	
RSM 025303002500 Packaged, sewage lift station, 757 000 L/day, excludes fencing or external piping	1.00	EA	Harbor Subcontractor	52,049	11,513	129,000	0	0	192,562	
				212.11	*29.26*	*9.40*	*0.00*		*250.77*	
RSM 025107600200 Piping, HDPE, butt fusion joints, 12 m lengths, 150 mm diameter, SDR 21	1,090.00	M	Harbor Subcontractor	231,199	31,892	10,246	0	0	273,337	
(Note: Productivity: Adusted from 14.5m/hr to 2m/hr due to installation underneath the floats in the water.)										
				345.39	*0.00*	*241.00*	*0.00*		*586.39*	
RSM 023903101560 Dock accessories, ladder, crown top, 5 to 7 step, maximum	176.00	EA	Harbor Subcontractor	60,788	0	42,416	0	0	103,204	
USR Harbor Misc Harbor Items	1.00	LS	Harbor Subcontractor	0	0	0	500,000	0	500,000	
(Note: The Misc Harbor Items for this project have been calculated based on drawing measurements for 320 vessels and scaled up quantity data from the City of Valdez Small Boat Harbor D and E Float Replacement designed by TNH Inc., Sept. 2006; The Misc Harbor Items include: fire protection system, fire extinguisher, life rings, direct reading meters, wireless meters and transmitters, receiver interface hard/software, spare parts and materials.)										
16 Bank Stabilization	**1.00**	**LS**	**Prime Dredging Contractor**	**398,529**	**530,097**	**658,490**	**0**	**0**	**1,587,116**	

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Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
1600 Bank Stabilization	**1.00**	**LS**	**Prime Dredging Contractor**	**398,529**	**530,097**	**658,490**	**0**	**0**	**1,587,116**	
1600 01 North Harbor Slope Protection	**1.00**	**LS**	**Prime Dredging Contractor**	**76,126**	**119,075**	**266,044**	**0**	**0**	**461,244**	
(Note: After the north end of the basin is dredged fast land will be constructed to allow a 1V:1.5:H slope to the inner harbor. The fast land slope to the inner harbor will be faced with secondary rock for erosion protection.)										
				14.98	*23.43*	*52.34*	*0.00*		*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	5,083.00	LM3	Prime Dredging Contractor	76,126	119,075	266,044	0	0	461,244	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 4,420cu m x 15% for overplace and loss = 5,083cu m; Productivity: Based on crew output rate for secondary rock placement.)										
1600 02 North Harbor Area Fast Land	**1.00**	**LS**	**Prime Dredging Contractor**	**210,109**	**235,374**	**0**	**0**	**0**	**445,484**	
(Note: The area north of the North Harbor Berm will need to be filled in and compacted with dredge material to create fast land. The grading and compacting of this material will also include delineating a 120m long access road.)										
				1.48	*1.89*	*0.00*	*0.00*		*3.37*	
RSM 023155200020 Place dredged material, spread, by dozer, excludes compaction	86,736.00	LM3	Prime Dredging Contractor	128,010	164,013	0	0	0	292,023	
(Note: Quantity: (41,610cu m + 30,670cu m) x 20% for shrinkage due to compaction = 86,736cu m)										
				1.14	*0.99*	*0.00*	*0.00*		*2.12*	
RSM 023153105640 Compaction, 4 passes, 150 mm lifts, riding, sheepsfoot or wobbly wheel roller	72,280.00	EM3	Prime Dredging Contractor	82,099	71,361	0	0	0	153,460	
(Note: Quantity: 72,280cu m in place.)										
1600 03 Basin Slope Protection	**1.00**	**LS**	**Prime Dredging Contractor**	**112,294**	**175,648**	**392,445**	**0**	**0**	**680,388**	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	Contractor	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
(Note: Basin Slope Protection will be placed inside the mooring basin and along the entrance and maneuvering channels, including all non-breakwater slopes.)										
				14.98	*23.43*	*52.34*	*0.00*		*90.74*	
USR Basin Slope Protection Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	7,498.00	LM3	Prime Dredging Contractor	112,294	175,648	392,445	0	0	680,388	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 6,520cu m x 15% for overplace and loss = 7,498cu m; Productivity: Based on crew output rate for secondary rock placement.)										
				0.00	*0.00*	*0.00*	*950,000.00*		*950,000.00*	
30 Planning, Engineering and Design	**1.00**	**EA**		**0**	**0**	**0**	**950,000**	**0**	**950,000**	
				0.00	*0.00*	*0.00*	*950,000.00*		*950,000.00*	
3001 Planning, Engineering and Design	**1.00**	**EA**		**0**	**0**	**0**	**950,000**	**0**	**950,000**	
USR Planning, Engineering and Design	1.00	LS		0	0	0	950,000	0	950,000	
(Note: Planning, Engineering and Design: This account covers Project Management, Planning and Environmental Compliance, Engineering and Design, Engineering Technical Review & VE, Contracting & Reprographics necessary to prepare the GNF project for construction. The geotechnical borings have already been performed. The cost is commensurate with other Alaska District projects this size and was provided by Bruce Sexauer, Project Formulation Section, (907) 753-5619.)										
				0.00	*0.00*	*0.00*	*1,450,000.00*		*1,450,000.00*	
31 Construction Management	**1.00**	**EA**		**0**	**0**	**0**	**1,450,000**	**0**	**1,450,000**	
				0.00	*0.00*	*0.00*	*1,450,000.00*		*1,450,000.00*	
3101 Construction Management	**1.00**	**EA**		**0**	**0**	**0**	**1,450,000**	**0**	**1,450,000**	
USR Construction Management	1.00	LS		0	0	0	1,450,000	0	1,450,000	
(Note: Construction Management: This account covers Construction Management, Project Management, and Engineering During Construction. Costs. Costs for this account were approximated to be $50,000 per month for the GNF items from time of award till end of construction. Information was provided by Bruce Sexauer, Project Formulation Section, (907) 753 -5619.)										

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
Project Bare to Direct Report			**24,261,458**	**3,513,619**	**415,391**	**0**	**0**	**643,648**	**257,832**	**29,091,947**	
01 Lands and Damages	**1.00**	**LS**	**334,800**	**0**	**0**	**0**	**0**	**0**	**0**	**334,800**	
			334,800.00	*0.00%*	*0.00%*					*334,800.00*	
0101 Lands and Damages	**1.00**	**EA**	**334,800**	**0**	**0**	**0**	**0**	**0**	**0**	**334,800**	
			334,800.00	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*334,800.00*	
USR Land and Damages	1.00	EA	334,800	0	0	0	0	0	0	334,800	

(Note: Lands and Damages: This account covers the cost for Lands and Damages for construction. The cost for this account was provided by Linda Arrington, of the Alaska District. A Real Estate Draft Report was prepared by the District in March 2007. The Federal portion due to administration was $32,000. The Non-Federal Projects Portion was $42,000 due to administration and $147,500 due to payments for Real Estate. The Total Real Estate Costs was $221,500 in August 1997 dollars (without contingency). This amount has been escalated from 4Q97 to 3Q10 using the CWCCIS tables (composite) from 31 Mar 2010, which gives a Total Real Estate Cost of $334,800 to be used in the estimate.)

02 Relocations	**1.00**	**LS**	**958,151**	**369,309**	**25,708**	**0**	**0**	**35,042**	**14,841**	**1,403,051**	

(Note: Fiber Optic Relocation A new Fiber Optic Cable line will be constructed from the existing manhole along the perimeter of the harbor project placing two 4-inch conduits to the point where the cable would enter the water along the perimeter of the new harbor breakwater. A detailed cost estimate was provided by the utility company GCI and incorporated into this MII estimate.)

0202 Mob, Demob & Preparatory Work	**1.00**	**LS**	**733,614**	**274,002**	**16,012**	**0**	**0**	**18,164**	**7,576**	**1,049,368**	

(Note: It is assumed that the Prime Contractor will be from the Seattle area. The Contractor will mob/demob the barge equipment and highly skilled staff from the Seattle area and the floating crane from Anchorage. Other construction equipment and skilled labor are assumed to be available in the Valdez area.)

0202 01 Mobilization	**1.00**	**LS**	**391,963**	**130,270**	**4,980**	**0**	**0**	**6,253**	**2,427**	**535,892**	
			128.53	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*189.38*	
USR Utility Mob/Demob Utility Mobilization/Demobilization	2,365.00	KM	303,963	130,270	4,980	0	0	6,253	2,427	447,892	

(Note: The Utility Contractor will mob/demob a splicing crew and barge from the Seattle area which is approximately 2,365km distance.)

			16,000.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*16,000.00*	
USR Personnel Lodging for 3 months	5.00	EA	80,000	0	0	0	0	0	0	80,000	

(Note: The Utility Contractor will mob/demob 5 highly skilled staff from the Seattle area. It is assumed that lodging per diem in Valdez will be $200 per person. Cost: $200 x 80 days = $16,000 per person.)

			800.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*800.00*	
USR Personnel Travel and Air Fare	10.00	EA	8,000	0	0	0	0	0	0	8,000	

(Note: The Utility Contractor will mob/demob 5 highly skilled staff from the Seattle area. It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person. Each person will fly back to Seattle 2 times per year over the 1 year relocation duration. Quantity of roundtrips is 5 x 2 x 1 = 10)

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
0202 02 Preparation Work	**1.00**	**LS**	**33,689**	**13,463**	**6,052**	**0**	**0**	**5,657**	**2,722**	**61,583**	
			2,275.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*2,275.00*	
HTW 019102004301 Temp. Construction Facilities, contractor personnel, 2400mm x 11m	1.00	EA	2,275	0	0	0	0	0	0	2,275	
			16.92	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*31.49*	
HNC FB-CLTYP Clerks, Typists, Bookkeepers & Receptionist	160.00	HR	2,707	1,160	483	0	0	470	217	5,038	
(Note: The Utility Contractor require an Admin Assistant to prepare the designs permits and submittals (160hrs).)											
			49.12	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*93.69*	
HNC FC-ENELC Engineers, Electrical	300.00	HR	14,736	6,315	3,009	0	0	2,695	1,353	28,108	
(Note: The Utility Contractor require an Electrical Engineer to prepare the designs permits and submittals (160hrs).)											
			34.16	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*64.32*	
HNC FC-SURYC Surveyors, Chief	160.00	HR	5,466	2,342	1,035	0	0	982	465	10,290	
(Note: The Utility Contractor require Surveyor to prepare the survey and easement acquisitions (160hrs).)											
			28.35	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*52.91*	
HNC FC-SURYR Surveyors	300.00	HR	8,505	3,645	1,525	0	0	1,510	686	15,872	
(Note: The Utility Contractor require Surveyor to prepare the survey and easement acquisitions (300hrs).)											
0202 03 Demobilization	**1.00**	**LS**	**307,963**	**130,270**	**4,980**	**0**	**0**	**6,253**	**2,427**	**451,892**	
			128.53	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*189.38*	
USR Utility Mob/Demob Utility Mobilization/Demobilization	2,365.00	KM	303,963	130,270	4,980	0	0	6,253	2,427	447,892	
(Note: The Utility Contractor will mob/demob a splicing crew and barge from the Seattle area which is approximately 2,365km distance.)											
			800.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*800.00*	
USR Personnel Travel and Air Fare	5.00	EA	4,000	0	0	0	0	0	0	4,000	
(Note: The Utility Contractor will mob/demob 5 highly skilled staff from the Seattle area. It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person.)											
0203 Utilities	**1.00**	**LS**	**224,537**	**95,306**	**9,696**	**0**	**0**	**16,878**	**7,266**	**353,684**	
0203 02 Fiber Optic Line	**1.00**	**LS**	**224,537**	**95,306**	**9,696**	**0**	**0**	**16,878**	**7,266**	**353,684**	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
(Note: A new Fiber Optic Cable line will be constructed from the existing manhole along the perimeter of the harbor project placing two 4-inch conduits to the point where the cable would enter the water along the perimeter of the new harbor breakwater. Then a splicing crew and barge mobilized from the Seattle area will pull the cable into conduit and lay to the intercept point of the existing cable south of the South Main Breakwater. The crew will locate the existing cable and unbury and remove armor protectors to allow recovery, cut the cable, recover the end and conduct the splice with the new cable set into the conduit to manhole, lay down the splice, place armor protectors on from end of conduit to safe distance from harbor construction site and finally jet bury the cable to protect from construction activities.)										
			417.55	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*658.49*	
USR Fiber optics cable Installation: Fiber optics cable	535.00	M	223,388	95,181	9,651	0	0	16,826	7,245	352,291	
(Note: The crew has been modified to include an excavator, barge equipment, underwater divers and operators. The crew output has also been modified to account for the low productivity with this type of construction.)											
			287.27	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*348.11*	
RSM 167104001500 Fiber optics cable enclosure, splice w/enclosure encapsulant	4.00	EA	1,149	126	45	0	0	52	20	1,392	
10 Breakwaters and Seawalls	**1.00**	**LS**	**6,916,237**	**1,049,311**	**71,010**	**0**	**0**	**142,477**	**55,454**	**8,234,489**	
1000 Breakwaters & Seawalls	**1.00**	**LS**	**6,916,237**	**1,049,311**	**71,010**	**0**	**0**	**142,477**	**55,454**	**8,234,489**	
(Note: Three breakwaters will be constructed to protect the harbor. The south main breakwater will be approximately 473 m long. The east main breakwater will be approximately 240 m long. And just to the west of the south main breakwater will be a 29 m long stub breakwater. Breakwater construction productivity is based on data given by Manson Construction (206-762-0850) for placing Armor Rock at a production rate of 100ton/hr which is equivalent to 48cu m/hr assuming 1.6ton/cy. The production rates for the secondary rock and core rock were adjusted up to 67cu m/hr and 109cu m/hr respectively based on bucket void ratio and ease of placement. Assume breakwater construction will progress with one 12 hour shift per day, 6 days a week for overtime calculation. Equipment costs for the dredge barge were increased by a factor of 10 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)										
1000 01 Stub Breakwater	**1.00**	**LS**	**130,114**	**19,356**	**1,307**	**0**	**0**	**2,625**	**1,022**	**154,423**	
(Note: The stub breakwater will be approximately 29 m long and include approximately 230 cu m of Core Rock, 520 cu m of Secondary Rock, and 650 cu m of Armor Rock. The rock will be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.)											
			41.35	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*49.61*	
USR Core Rock Place core rock (2.2kg - 91kg) with 3.8 cubic meter (cu m) clamshell bucket	276.00	LM3	11,411	1,815	123	0	0	246	96	13,691	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez, Alaska (907-835-4756) $26.00/cu m delivered to project site; Quantity: 230cu m x 20% for overplace and loss = 276cu m; Productivity: Based on crew output rate for core rock placement.)											
			77.31	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*90.74*	

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	598.00	LM3	46,228	6,398	432	0	0	868	338	54,264	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 520cu m x 15% for overplace and loss = 598cu m; Productivity: Based on crew output rate for secondary rock placement.)											
			101.36	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*120.93*	
USR Armor Rock Place armor rock (1016kg - 1690kg) with 3.8 cubic meter (cu m) clamshell bucket	715.00	LM3	72,474	11,142	752	0	0	1,511	588	86,468	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $65.00/cu m delivered to project site; Quantity: 650cu m x 10% for overplace and loss = 715cu m; Productivity: Based on crew output rate for armor rock placement.)											
1000 02 South Main Breakwater	**1.00**	**LS**	**4,229,419**	**643,190**	**43,418**	**0**	**0**	**87,229**	**33,951**	**5,037,208**	
(Note: The south main breakwater will be approximately 473 m long and include approximately 25,750 cu m of Core Rock, 10,160 cu m of Secondary Rock, and 18,370 cu m of Armor Rock. The rock will be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.)											
			41.35	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*49.61*	
USR Core Rock Place core rock (2.2kg - 91kg) with 3.8 cubic meter (cu m) clamshell bucket	30,900.00	LM3	1,277,577	203,219	13,718	0	0	27,560	10,727	1,532,802	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez, Alaska (907-835-4756) $26.00/cu m delivered to project site; Quantity: 25,750cu m x 20% for overplace and loss = 30,900cu m; Based on crew output rate for core rock placement.)											
			77.31	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	11,685.00	LM3	903,311	125,022	8,440	0	0	16,955	6,599	1,060,327	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 10,160cu m x 15% for overplace and loss = 11,685cu m; Productivity: Based on crew output rate for secondary rock placement.)											
			101.36	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*120.93*	
USR Armor Rock Place armor rock (1016kg - 1690kg) with 3.8 cubic meter (cu m) clamshell bucket	20,210.00	LM3	2,048,531	314,949	21,261	0	0	42,713	16,625	2,444,079	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $65.00/cu m delivered to project site; Quantity: 18,370cu m x 10% for overplace and loss = 20,210cu m; Productivity: Based on crew output rate for armor rock placement.)											
1000 03 East Main Breakwater	**1.00**	**LS**	**2,553,614**	**386,144**	**26,067**	**0**	**0**	**52,369**	**20,383**	**3,038,576**	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
(Note: The east main breakwater will be approximately 240 m long and include approximately 11,590 cu m of Core Rock, 6,980 cu m of Secondary Rock, and 12,180 cu m of Armor Rock. The rock will be placed directly on the ocean floor and be built to an elevation of approximately +5 m MLLW.)											
			41.35	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*49.61*	
USR Core Rock Place core rock (2.2kg - 91kg) with 3.8 cubic meter (cu m) clamshell bucket	13,908.00	LM3	575,034	91,468	6,175	0	0	12,405	4,828	689,910	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez, Alaska (907-835-4756) $26.00/cu m delivered to project site; Quantity: 11,590cu m x 20% for overplace and loss = 13,908cu m; Based on crew output rate for core rock placement.)											
			77.31	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	8,027.00	LM3	620,528	85,884	5,798	0	0	11,647	4,533	728,390	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 6,980cu m x 15% for overplace and loss = 8,027cu m; Productivity: Based on crew output rate for secondary rock placement.)											
			101.36	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*120.93*	
USR Armor Rock Place armor rock (1016kg - 1690kg) with 3.8 cubic meter (cu m) clamshell bucket	13,398.00	LM3	1,358,052	208,792	14,094	0	0	28,316	11,021	1,620,276	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $65.00/cu m delivered to project site; Quantity: 12,180cu m x 10% for overplace and loss = 13,398cu m; Productivity: Based on crew output rate for armor rock placement.)											
1000 04 Navigation Aid Foundation	**1.00**	**LS**	**3,090**	**621**	**219**	**0**	**0**	**255**	**98**	**4,283**	
(Note: Two navigation aid foundations will be constructed on top of the breakwaters near the entrance channel. The foundations will each be 2m x 2m x 0.6m in dimension. The Coast Guard will provide the navigation markers and attachment hardware seperately.)											
			429.18	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*594.84*	
RSM 033102403800 Structural concrete, in place, spread footing, includes forms(4 uses), reinforcing steel, and finishing	7.20	M3	3,090	621	219	0	0	255	98	4,283	
(Note: Quantity: (2) 2m x 2m x 0.6m x 50% for overplace and loss = 7.2cu m)											
12 Navigation Ports & Harbors	**1.00**	**LS**	**12,395,652**	**1,838,659**	**298,251**	**0**	**0**	**427,515**	**172,413**	**15,132,490**	
1202 Harbors	**1.00**	**LS**	**12,395,652**	**1,838,659**	**298,251**	**0**	**0**	**427,515**	**172,413**	**15,132,490**	
(Note: The harbor basin would be approximately 435 m by 130 m and dredged to MLLW depths varying from -5.5 m at the entrance to -4 m in the center and to -2.7 m at the west end as the length and draft of the vessels dictate.)											

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
1202 01 Dredging and Disposal	**1.00**	**LS**	**2,321,086**	**994,751**	**77,867**	**0**	**0**	**156,626**	**60,445**	**3,610,775**	
(Note: A total of approximately 186,410 cubic meters of dredging would be required for the entrance channel, maneuvering channel and basin. The dredged material will be used to create fast land and the remainder disposed of at Two Moon Bay, Alaska, which is approximately 48km from the project site (96km round trip).)											
			1,003,486.42	*430,065.61%*	*16,915.30%*					*1,552,547.17*	
1202 01 00 Dredging	**1.00**	**EA**	**1,003,486**	**430,066**	**16,915**	**0**	**0**	**73,652**	**28,428**	**1,552,547**	
			5.23	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*8.09*	
USR Dredge Dredging, barge mounted 7.6 cubic meter (cm) clamshell bucket excavation into dump scow barge	192,000.00	BM3	1,003,486	430,066	16,915	0	0	73,652	28,428	1,552,547	
(Note: Quantity: 186,410cu m x 3% overdredge = 192,000cu m; Productivity is based on data given by Manson Construction (206-762-0850) for dredging at a production rate of 5400cy/24hr which is equivalent to 172cu m/hr, this rate was adjusted based on using a 7.6cu m bucket to 186cu m/hr. Productivity: Based on crew output rate for harbor dredging. - Assume dredging will progress with two 10 hour shifts per day, 6 days a week for overtime calculation; Cost: Equipment costs for the dredge barge were increased by a factor of 10 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)												
			973,300.43	*417,128.76%*	*45,366.58%*					*1,509,234.65*	
1202 01 01 Disposal Two Moon Bay	**1.00**	**EA**	**973,300**	**417,129**	**45,367**	**0**	**0**	**53,036**	**20,403**	**1,509,235**	
(Note: Scow Dumping)											
			6.77	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*10.51*	
USR Dump Scow - Two Moon Bay Dump Scow Barges & Tug	143,664.00	LM3	973,300	417,129	45,367	0	0	53,036	20,403	1,509,235	
(Note: Quantity: 119,720cu m x 20% swell factor = 143,664cu m; Productivity: 2 dump scows x 1150cu m / [(96km / 5knots) + 2hrs] = 186cu m/hr; Cost: Equipment costs for the dump scow barge and tug were increased by a factor of 2 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)											
			344,299.21	*147,556.81%*	*15,584.94%*					*548,993.33*	
1202 01 05 Disposal Fast Land	**1.00**	**EA**	**344,299**	**147,557**	**15,585**	**0**	**0**	**29,938**	**11,614**	**548,993**	
			1.16	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*1.79*	
USR Dump Scow - Fast Land Dump Scow Barges & Tug	86,736.00	LM3	100,273	42,974	4,674	0	0	5,464	2,102	155,487	
(Note: Quantity: (41,610cu m + 30,670cu m) x 20% swell factor = 86,736cu m; Productivity: 2 dump scows x 1150cu m / [(0.5km / 5knots) + 1hrs] = 1090cu m/hr; Cost: Equipment costs for the dump scow barge and tug were increased by a factor of 2 based on quotes from Manson Construction, Kiewit Company and Dutra-Group.)											
			2.81	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*4.54*	
USR Fast Land Fast Land Off Loading	86,736.00	LM3	244,026	104,583	10,911	0	0	24,474	9,512	393,506	
(Note: Quantity: 72,280cu m x 20% swell factor = 86,736cu m; Assumes dredged material would be placed into skip buckets on the dump scow and transported to the fast land site to be off loaded by crane.)											

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
1202 02 Hydro Surveys (Harbor Improvements)	**1.00**	**LS**	**73,180**	**1,363**	**307**	**0**	**0**	**339**	**144**	**75,333**	
(Note: The total small boat harbor improvement area is approximately 6.56 hectares (16.2 acres). The improvement area will be surveyed once prior to construction and then again after all improvements have been completed.)											
			35,000.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*35,000.00*	
USR Survey Mapping Survey Mapping	2.00	EA	70,000	0	0	0	0	0	0	70,000	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the hydro survey mapping can be processed for approximately $35,000 each time.)											
			1,590.02	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*2,666.40*	
USR Hydro Surveys Hydro Surveying, 3 person crew with boat	2.00	DAY	3,180	1,363	307	0	0	339	144	5,333	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the boat crew can obtain the data in 1 day. Since 2 surveys are required the total quantity is 2 days.)											
1202 03 Hydro Surveys (Disposal Site)	**1.00**	**LS**	**43,180**	**1,363**	**307**	**0**	**0**	**339**	**144**	**45,333**	
(Note: The disposal site area is approximately 8.3 hectares (20.0 acres). The disposal area will be surveyed once prior to dumping the dredge material and then again at completion.)											
			43,180.04	*1,362.87%*	*307.07%*					*45,332.80*	
1202 03 01 Hydro Surveys Disposal Alternative 1	**1.00**	**EA**	**43,180**	**1,363**	**307**	**0**	**0**	**339**	**144**	**45,333**	
			20,000.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20,000.00*	
USR Survey Mapping Survey Mapping	2.00	EA	40,000	0	0	0	0	0	0	40,000	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the hydro survey mapping can be processed for approximately $20,000 each time.)											
			1,590.02	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*2,666.40*	
USR Hydro Surveys Hydro Surveying, 3 person crew with boat	2.00	DAY	3,180	1,363	307	0	0	339	144	5,333	
(Note: Based on a quote from TNH Inc, Anchorage, Alaska (907-279-0543) the boat crew can obtain the data in 1 day. Since 2 surveys are required the total quantity is 2 days.)											
1202 04 Inner Harbor Floats and Facilities	**1.00**	**LS**	**9,958,206**	**841,182**	**219,770**	**0**	**0**	**270,212**	**111,680**	**11,401,050**	
(Note: The Inner Harbor Floats and Facilities quantities for this project have been calculated based on drawing measurements for 320 vessels and scaled up quantity data from the City of Valdez Small Boat Harbor D and E Float Replacement designed by TNH Inc., Sept. 2006.)											
			330.46	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.91%*	*380.57*	

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
Steel Piles Steel Piles, furnished, barge driven, 15 m long, by tug boat, excludes mobilization	4,267.00	M	1,410,077	147,140	22,925	0	0	30,998	12,759	1,623,899	
(Note: Material Cost: Adjusted based on material cost construction bid from the City of Valdez Small Boat Harbor D and E Float Replacement; Productivity: Based on crew output for pile driving.)											
			1,191.08	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.91%*	*1,337.32*	
RSM 023903400500 Docks, floating, small boat, prefabricated, no shore facilities, excludes pilings	5,460.00	M2	6,503,324	465,859	120,247	0	0	150,304	62,052	7,301,786	
(Note: Material Cost: based on quote provided by PND Engineers (John O., 253-383-2740); Delivery Cost: based on quote provided by Alaska Marine Lines of $130/M2 (800-326-8346).)											
			636.46	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.91%*	*683.04*	
RSM 023903102040 Dock accessories, mooring whip, fiberglass, bolted to dock	640.00	PR	407,332	15,485	5,394	0	0	6,376	2,558	437,145	
			1,291.18	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.91%*	*1,612.10*	
RSM 131110501120 Anodes, graphite type with epoxy cap, 36kg, 150mm x 1800mmm	280.00	EA	361,530	46,341	16,516	0	0	19,169	7,832	451,389	
			889.35	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.91%*	*1,130.21*	
RSM 023903101060 Dock accessories, electrical receptacle with circuit breaker, pile mounted, double, 50 amp, 125/240 volt	320.00	EA	284,592	39,682	14,212	0	0	16,442	6,740	361,668	
			83.58	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.91%*	*143.17*	
RSM 025307703040 Piping, drainage and sewage, HDPE Corrugated Type S with watertight gaskets, 200 mm diameter, excludes excavation or backfill	1,090.00	M	91,097	32,992	12,403	0	0	13,687	5,881	156,060	
(Note: Productivity: Adusted from 14.5m/hr to 2m/hr due to installation underneath the floats in the water.)											
			165,804.96	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.91%*	*192,561.78*	
RSM 025303002500 Packaged, sewage lift station, 757 000 L/day, excludes fencing or external piping	1.00	EA	165,805	15,774	3,902	0	0	5,042	2,039	192,562	
			145.62	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.91%*	*250.77*	

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
RSM 025107600200 Piping, HDPE, butt fusion joints, 12 m lengths, 150 mm diameter, SDR 21	1,090.00	M	158,727	63,635	19,199	0	0	22,316	9,460	273,337	
(Note: Productivity: Adusted from 14.5m/hr to 2m/hr due to installation underneath the floats in the water.)											
			430.24	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.91%*	*586.39*	
RSM 023903101560 Dock accessories, ladder, crown top, 5 to 7 step, maximum	176.00	EA	75,722	14,274	4,973	0	0	5,877	2,358	103,204	
USR Harbor Misc Harbor Items	1.00	LS	500,000	0	0	0	0	0	0	500,000	
(Note: The Misc Harbor Items for this project have been calculated based on drawing measurements for 320 vessels and scaled up quantity data from the City of Valdez Small Boat Harbor D and E Float Replacement designed by TNH Inc., Sept. 2006; The Misc Harbor Items include: fire protection system, fire extinguisher, life rings, direct reading meters, wireless meters and transmitters, receiver interface hard/software, spare parts and materials.)											
16 Bank Stabilization	**1.00**	**LS**	**1,256,617**	**256,340**	**20,421**	**0**	**0**	**38,613**	**15,124**	**1,587,116**	
1600 Bank Stabilization	**1.00**	**LS**	**1,256,617**	**256,340**	**20,421**	**0**	**0**	**38,613**	**15,124**	**1,587,116**	
1600 01 North Harbor Slope Protection	**1.00**	**LS**	**392,942**	**54,385**	**3,671**	**0**	**0**	**7,376**	**2,871**	**461,244**	
(Note: After the north end of the basin is dredged fast land will be constructed to allow a 1V:1.5:H slope to the inner harbor. The fast land slope to the inner harbor will be faced with secondary rock for erosion protection.)											
			77.31	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*90.74*	
USR Secondary Rock Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	5,083.00	LM3	392,942	54,385	3,671	0	0	7,376	2,871	461,244	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 4,420cu m x 15% for overplace and loss = 5,083cu m; Productivity: Based on crew output rate for secondary rock placement.)											
1600 02 North Harbor Area Fast Land	**1.00**	**LS**	**284,041**	**121,732**	**11,334**	**0**	**0**	**20,357**	**8,019**	**445,484**	
(Note: The area north of the North Harbor Berm will need to be filled in and compacted with dredge material to create fast land. The grading and compacting of this material will also include delineating a 120m long access road.)											
			2.17	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*3.37*	
RSM 023155200020 Place dredged material, spread, by dozer, excludes compaction	86,736.00	LM3	188,269	80,687	5,779	0	0	12,403	4,885	292,023	
(Note: Quantity: (41,610cu m + 30,670cu m) x 20% for shrinkage due to compaction = 86,736cu m)											

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
			1.33	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*2.12*	
RSM 023153105640 Compaction, 4 passes, 150 mm lifts, riding, sheepsfoot or wobbly wheel roller	72,280.00	EM3	95,772	41,045	5,555	0	0	7,955	3,133	153,460	
(Note: Quantity: 72,280cu m in place.)											
1600 03 Basin Slope Protection	**1.00**	**LS**	**579,634**	**80,224**	**5,415**	**0**	**0**	**10,880**	**4,235**	**680,388**	
(Note: Basin Slope Protection will be placed inside the mooring basin and along the entrance and maneuvering channels, including all non-breakwater slopes.)											
			77.31	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*90.74*	
USR Basin Slope Protection Place secondary rock (91kg - 844kg) with 3.8 cubic meter (cu m) clamshell bucket	7,498.00	LM3	579,634	80,224	5,415	0	0	10,880	4,235	680,388	
(Note: Material Cost: Quote from Harris Sand and Gravel, Valdez (907-835-4756) $52.34/cu m delivered to project site; Quantity: 6,520cu m x 15% for overplace and loss = 7,498cu m; Productivity: Based on crew output rate for secondary rock placement.)											
			950,000.00	*0.00%*	*0.00%*					*950,000.00*	
30 Planning, Engineering and Design	**1.00**	**EA**	**950,000**	**0**	**0**	**0**	**0**	**0**	**0**	**950,000**	
			950,000.00	*0.00%*	*0.00%*					*950,000.00*	
3001 Planning, Engineering and Design	**1.00**	**EA**	**950,000**	**0**	**0**	**0**	**0**	**0**	**0**	**950,000**	
USR Planning, Engineering and Design	1.00	LS	950,000	0	0	0	0	0	0	950,000	
(Note: Planning, Engineering and Design: This account covers Project Management, Planning and Environmental Compliance, Engineering and Design, Engineering Technical Review & VE, Contracting & Reprographics necessary to prepare the GNF project for construction. The geotechnical borings have already been performed. The cost is commensurate with other Alaska District projects this size and was provided by Bruce Sexauer, Project Formulation Section, (907) 753-5619.)											
			1,450,000.00	*0.00%*	*0.00%*					*1,450,000.00*	
31 Construction Management	**1.00**	**EA**	**1,450,000**	**0**	**0**	**0**	**0**	**0**	**0**	**1,450,000**	
			1,450,000.00	*0.00%*	*0.00%*					*1,450,000.00*	
3101 Construction Management	**1.00**	**EA**	**1,450,000**	**0**	**0**	**0**	**0**	**0**	**0**	**1,450,000**	
USR Construction Management	1.00	LS	1,450,000	0	0	0	0	0	0	1,450,000	
(Note: Construction Management: This account covers Construction Management, Project Management, and Engineering During Construction. Costs. Costs for this account were approximated to be $50,000 per month for the GNF items from time of award till end of construction. Information was provided by Bruce Sexauer, Project Formulation Section, (907) 753 -5619.)											

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
Job Office Overhead Direct Cost Report									
Prime Dredging Contractor									
			2,273,084.43	*1,464,003.56*	*115,516.50*	*72,000.00*		*5,572,504.49*	
OVERHEAD ITEMS	**1.00**	**EA**	**2,273,084**	**1,464,004**	**115,517**	**72,000**	**1,647,900**	**5,572,504**	
			0.00	*61,514.57*	*0.00*	*0.00*		*61,514.57*	
USR ST Small Tools	1.00	EA	0	61,515	0	0	0	61,515	
			169,366.85	*1,106,888.23*	*0.00*	*72,000.00*		*1,348,255.08*	
MOBILIZATION/DEMOBILIZATION	**1.00**	**EA**	**169,367**	**1,106,888**	**0**	**72,000**	**0**	**1,348,255**	
Mobilization	**1.00**	**LS**	**84,683**	**553,444**	**0**	**64,000**	**0**	**702,128**	
			27.29	*186.42*	*0.00*	*0.00*		*213.71*	
USR SEA Mob/Demob SEA Mobilization/Demobilization	2,365.00	KM	64,539	440,890	0	0	0	505,429	
(Note: The Contractor will mob/demob the barge equipment from the Seattle area which is approximately 2,365km distance.)									
			27.79	*155.25*	*0.00*	*0.00*		*183.03*	
USR ANC Mob/Demob ANC Mobilization/Demobilization	725.00	KM	20,145	112,554	0	0	0	132,699	
(Note: The Contractor will mob/demob the floating crane from the Anchorage area which is approximately 725km distance.)									
			0.00	*0.00*	*0.00*	*800.00*		*800.00*	
USR Personnel Travel and Air Fare	80.00	EA	0	0	0	64,000	0	64,000	
(Note: The Contractor will mob/demob 10 highly skilled staff from the Seattle area. It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person. Each person will fly back to Seattle 4 times per year over the 2 year project duration. Quantity of roundtrips is 10 x 4 x 2 = 80)									
Demobilization	**1.00**	**LS**	**84,683**	**553,444**	**0**	**8,000**	**0**	**646,128**	
			27.29	*186.42*	*0.00*	*0.00*		*213.71*	
USR SEA Mob/Demob SEA Mobilization/Demobilization	2,365.00	KM	64,539	440,890	0	0	0	505,429	
(Note: The Contractor will mob/demob the barge equipment from the Seattle area which is approximately 2,365km distance.)									
			27.79	*155.25*	*0.00*	*0.00*		*183.03*	
USR ANC Mob/Demob ANC Mobilization/Demobilization	725.00	KM	20,145	112,554	0	0	0	132,699	
(Note: The Contractor will mob/demob the floating crane from the Anchorage area which is approximately 725km distance.)									

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Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
			0.00	*0.00*	*0.00*	*800.00*		*800.00*	
USR Personnel Travel and Air Fare	10.00	EA	0	0	0	8,000	0	8,000	
(Note: The Contractor will mob/demob 10 highly skilled staff from the Seattle area. It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person.)									
			2,103,717.58	*295,600.76*	*115,516.50*	*0.00*		*4,162,734.85*	
JOB OFFICE OVERHEAD	**1.00**	**EA**	**2,103,718**	**295,601**	**115,517**	**0**	**1,647,900**	**4,162,735**	
			882,948.70	*197,797.39*	*0.00*	*0.00*		*1,435,146.09*	
SUPERVISION AND MANAGEMENT	**1.00**	**EA**	**882,949**	**197,797**	**0**	**0**	**354,400**	**1,435,146**	
			882,948.70	*0.00*	*0.00*	*0.00*		*882,948.70*	
Supervision Personnel	**1.00**	**EA**	**882,949**	**0**	**0**	**0**	**0**	**882,949**	
			15,223.25	*0.00*	*0.00*	*0.00*		*15,223.25*	
HNC FA-AGENS General Superintendents (P.M.)	29.00	MO	441,474	0	0	0	0	441,474	
(Note: Assumed a Carpenter / Millwright Wages plus $3.00 / hour)									
			15,223.25	*0.00*	*0.00*	*0.00*		*15,223.25*	
HNC FA-AGENS General Labor Foreman	29.00	MO	441,474	0	0	0	0	441,474	
(Note: Assumed a Carpenter / Millwright Wages plus $3.00 / hour)									
			0.00	*197,797.39*	*0.00*	*0.00*		*197,797.39*	
Management Vehicles	**1.00**	**EA**	**0**	**197,797**	**0**	**0**	**0**	**197,797**	
			0.00	*3,410.30*	*0.00*	*0.00*		*3,410.30*	
MAP T50XX005 TRUCK, HIGHWAY, CONVENTIONAL, 3/4 TON PICKUP, 4X4	29.00	MO	0	98,899	0	0	0	98,899	
			0.00	*3,410.30*	*0.00*	*0.00*		*3,410.30*	
MAP T50XX005 TRUCK, HIGHWAY, CONVENTIONAL, 3/4 TON PICKUP, 4X4	29.00	MO	0	98,899	0	0	0	98,899	
			0.00	*0.00*	*0.00*	*0.00*		*354,400.00*	
Management Subsistance and Travel	**1.00**	**EA**	**0**	**0**	**0**	**0**	**354,400**	**354,400**	
			0.00	*0.00*	*0.00*	*0.00*		*800.00*	
USR Home Office Execs Travel to Job	8.00	EA	0	0	0	0	6,400	6,400	
(Note: It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person. Assume travel once each quarter = 8 times total.)									
			0.00	*0.00*	*0.00*	*0.00*		*400.00*	
USR Daily Subsistence (Per Man Day)	870.00	DAY	0	0	0	0	348,000	348,000	
(Note: It is assumed that per diem in Valdez will be $200 per supervisor person. Cost: 2 persons x $200 = $400 per day. (29 months = 870 days))									

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Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
			829,988.31	*93,517.66*	*44,994.00*	*0.00*		*1,703,949.97*	
ADMINISTRATION JOB OFFICE	**1.00**	**EA**	**829,988**	**93,518**	**44,994**	**0**	**735,450**	**1,703,950**	
			612,921.33	*0.00*	*0.00*	*0.00*		*612,921.33*	
Field Office Administration Personnel	**1.00**	**EA**	**612,921**	**0**	**0**	**0**	**0**	**612,921**	
			7,551.14	*0.00*	*0.00*	*0.00*		*7,551.14*	
HNC FB-ACONT Contract Administrators	29.00	MO	218,983	0	0	0	0	218,983	
(Note: Assumed a Occupation Code of #01013 Accounting Clerk III)									
			8,126.41	*0.00*	*0.00*	*0.00*		*8,126.41*	
HNC FB-OMANGR Office Managers	29.00	MO	235,666	0	0	0	0	235,666	
(Note: Assumed a Occupation Code of #01400 Supply Technician +3.00 w/ nonething better)									
			5,457.67	*0.00*	*0.00*	*0.00*		*5,457.67*	
HNC FB-CLTYP Clerks, Typists, Bookkeepers & Receptionist	29.00	MO	158,272	0	0	0	0	158,272	
(Note: Assumed a Occupation Code of #01116 General Clerk)									
			0.00	*88,426.12*	*0.00*	*0.00*		*88,426.12*	
Field Office Vehicles	**1.00**	**EA**	**0**	**88,426**	**0**	**0**	**0**	**88,426**	
			0.00	*3,049.18*	*0.00*	*0.00*		*3,049.18*	
MAP T50XX001 TRUCK, HIGHWAY, CONVENTIONAL, 1/2 TON PICKUP, 4X2	29.00	MO	0	88,426	0	0	0	88,426	
			43,439.44	*4,142.86*	*33,994.00*	*0.00*		*85,926.29*	
Field Office Buildings & Supplies	**1.00**	**EA**	**43,439**	**4,143**	**33,994**	**0**	**4,350**	**85,926**	
			0.00	*0.00*	*293.00*	*0.00*		*293.00*	
RSM 015205000450 Office Trailer, furnished, rent per month, 50' x 10', excl. hookups	29.00	MO	0	0	8,497	0	0	8,497	
			0.00	*0.00*	*293.00*	*0.00*		*293.00*	
RSM 015205000450 Office Trailer, furnished, rent per month, 50' x 10', excl. hookups	29.00	MO	0	0	8,497	0	0	8,497	
			0.00	*142.86*	*0.00*	*0.00*		*142.86*	
USR Office Equipment & Furniture	29.00	MO	0	4,143	0	0	0	4,143	
			0.00	*0.00*	*17,000.00*	*0.00*		*17,000.00*	
USR Office - Supplies Assume 5% of Office Labor costs.	1.00	MO	0	0	17,000	0	0	17,000	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
			0.00	*0.00*	*0.00*	*0.00*		*150.00*	
USR Mailing, Shipping Cost	29.00	MO	0	0	0	0	4,350	4,350	
			1,497.91	*0.00*	*0.00*	*0.00*		*1,497.91*	
USR 22 Hired Janitors, for 2 hr/night * 22 day / month = 44 hr/month	29.00	MO	43,439	0	0	0	0	43,439	
(Note: = 44 hr/month)									
			172,780.95	*948.68*	*10,000.00*	*0.00*		*183,729.63*	
Field Office Security Personnel	**1.00**	**EA**	**172,781**	**949**	**10,000**	**0**	**0**	**183,730**	
			5,804.88	*0.00*	*0.00*	*0.00*		*5,804.88*	
HNC FD-SECWT Security, Watchmen/Guards	29.00	MO	168,341	0	0	0	0	168,341	
			8.88	*1.90*	*20.00*	*0.00*		*30.78*	
RSM 028201300500 Chain link fence, industrial, galvanized steel, 6 ga. wire, 2" posts @ 10' OC,, 6' high, includes excavation	500.00	LF	4,439	949	10,000	0	0	15,388	
			0.00	*0.00*	*0.00*	*0.00*		*696,000.00*	
Field Office Subsistance and Travel	**1.00**	**EA**	**0**	**0**	**0**	**0**	**696,000**	**696,000**	
			0.00	*0.00*	*0.00*	*0.00*		*800.00*	
USR Daily Subsistence (Per Man Day)	870.00	DAY	0	0	0	0	696,000	696,000	
(Note: It is assumed that per diem in Valdez will be $100 per field person. Cost: 8 persons x $100 = $800 per day. (29 months = 870 days))									
			846.60	*0.00*	*1,000.00*	*0.00*		*10,846.60*	
Field Office Utility Installation	**1.00**	**EA**	**847**	**0**	**1,000**	**0**	**9,000**	**10,847**	
			423.30	*0.00*	*500.00*	*0.00*		*923.30*	
RSM 015100500890 Temporary electrical power equipment (pro-rated per job), connections, office trailer, 200 amp	1.00	EA	423	0	500	0	0	923	
			423.30	*0.00*	*500.00*	*0.00*		*923.30*	
RSM 015100500890 Temporary electrical power equipment (pro-rated per job), connections, office trailer, 200 amp	1.00	EA	423	0	500	0	0	923	
			0.00	*0.00*	*0.00*	*0.00*		*500.00*	
USR Install Telephone	2.00	EA	0	0	0	0	1,000	1,000	
			0.00	*0.00*	*0.00*	*0.00*		*1,500.00*	
USR Install Water Supply	2.00	EA	0	0	0	0	3,000	3,000	

Currency in US dollars

Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
			0.00	*0.00*	*0.00*	*0.00*		*2,500.00*	
USR Install Sewer Connection	2.00	EA	0	0	0	0	5,000	5,000	
			0.00	*0.00*	*0.00*	*0.00*		*26,100.00*	
Field Office Utility Usage Fees	**1.00**	**EA**	**0**	**0**	**0**	**0**	**26,100**	**26,100**	
			0.00	*0.00*	*0.00*	*0.00*		*500.00*	
USR Office Telephone including Long Distance	29.00	MO	0	0	0	0	14,500	14,500	
			0.00	*0.00*	*0.00*	*0.00*		*200.00*	
USR Office Temporary Power / Lighting	29.00	MO	0	0	0	0	5,800	5,800	
			0.00	*0.00*	*0.00*	*0.00*		*75.00*	
USR Garbage Service	29.00	MO	0	0	0	0	2,175	2,175	
			0.00	*0.00*	*0.00*	*0.00*		*75.00*	
USR Water Usage Fees	29.00	MO	0	0	0	0	2,175	2,175	
			0.00	*0.00*	*0.00*	*0.00*		*50.00*	
USR Sewer Usage Fees	29.00	MO	0	0	0	0	1,450	1,450	
			69,543.31	*4,285.71*	*6,600.00*	*0.00*		*81,029.03*	
ENGINEERING AND SURVEYING	**1.00**	**EA**	**69,543**	**4,286**	**6,600**	**0**	**600**	**81,029**	
			69,543.31	*4,285.71*	*6,600.00*	*0.00*		*81,029.03*	
Field Engineering	**1.00**	**EA**	**69,543**	**4,286**	**6,600**	**0**	**600**	**81,029**	
			11,590.55	*0.00*	*0.00*	*0.00*		*11,590.55*	
HNC FC-ENGPE Engineers, Project	6.00	MO	69,543	0	0	0	0	69,543	
(Note: Assumed a Occupation Code of #29086 Engineer Technician IV)									
			0.00	*0.00*	*0.00*	*0.00*		*100.00*	
USR Mailing, Shipping Drawing and Submittal cost	6.00	MO	0	0	0	0	600	600	
			0.00	*0.00*	*1,100.00*	*0.00*		*1,100.00*	
USR Engineering - Plans & Supplies Assume 5% of Labor cost.	6.00	MO	0	0	6,600	0	0	6,600	
			0.00	*714.29*	*0.00*	*0.00*		*714.29*	
USR Engineering - Equipment	6.00	MO	0	4,286	0	0	0	4,286	
			194,435.00	*0.00*	*0.00*	*0.00*		*194,435.00*	
QUALITY CONTROL AND TESTING	**1.00**	**EA**	**194,435**	**0**	**0**	**0**	**0**	**194,435**	
			194,435.00	*0.00*	*0.00*	*0.00*		*194,435.00*	
Quality Control Personnel	**1.00**	**EA**	**194,435**	**0**	**0**	**0**	**0**	**194,435**	

Currency in US dollars

Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
			9,721.75	*0.00*	*0.00*	*0.00*		*9,721.75*	
HNC FC-ENGQC Engineers, Quality Control	10.00	MO	97,217	0	0	0	0	97,217	
(Note: Assumed a Occupation Code of #29086 Engineer Technician III)									
			9,721.75	*0.00*	*0.00*	*0.00*		*9,721.75*	
HNC FC-INSPE Inspectors	10.00	MO	97,217	0	0	0	0	97,217	
(Note: Assumed a Occupation Code of #29063 Drafter II)									
			1,325.82	*0.00*	*35,872.00*	*0.00*		*37,197.82*	
SANITATION FAC & TEMP BLDGS	**1.00**	**EA**	**1,326**	**0**	**35,872**	**0**	**0**	**37,198**	
			0.00	*0.00*	*17,400.00*	*0.00*		*17,400.00*	
Sanitation Facilities	**1.00**	**EA**	**0**	**0**	**17,400**	**0**	**0**	**17,400**	
			0.00	*0.00*	*600.00*	*0.00*		*600.00*	
HNC 015205001400 Toilet, portable, chemical, rent per month	29.00	MO	0	0	17,400	0	0	17,400	
(Note: Assume 6 toilets at $100/toilet/mo = 6 x $100 x 29 = $17,000)									
			1,325.82	*0.00*	*18,472.00*	*0.00*		*19,797.82*	
Temporary Buildings	**1.00**	**EA**	**1,326**	**0**	**18,472**	**0**	**0**	**19,798**	
			0.00	*0.00*	*109.00*	*0.00*		*109.00*	
RSM 015205001350 Storage Boxes, rent per month, 40' x 8'	29.00	MO	0	0	3,161	0	0	3,161	
			0.00	*0.00*	*109.00*	*0.00*		*109.00*	
RSM 015205001350 Storage Boxes, rent per month, 40' x 8'	29.00	MO	0	0	3,161	0	0	3,161	
			441.94	*0.00*	*4,050.00*	*0.00*		*4,491.94*	
USR 015901161 8'X 8'X 8'H(64 SF) Job Shack on skids. Site made.	3.00	EA	1,326	0	12,150	0	0	13,476	
			116,637.62	*0.00*	*2,482.50*	*0.00*		*126,570.12*	
PROJECT UTILITIES SITE & CLEANUP	**1.00**	**EA**	**116,638**	**0**	**2,483**	**0**	**7,450**	**126,570**	
			116,637.62	*0.00*	*0.00*	*0.00*		*118,087.62*	
Site Cleanup	**1.00**	**EA**	**116,638**	**0**	**0**	**0**	**1,450**	**118,088**	
			4,021.99	*0.00*	*0.00*	*0.00*		*4,021.99*	
USR 84 Daily Site Cleanup, 1 laborer * 2 hrs/day * 22 day/mo = 44mhrs	29.00	MO	116,638	0	0	0	0	116,638	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	DirectCost	C/O
			0.00	*0.00*	*0.00*	*0.00*		*50.00*	
USR Rental, Dumpster 20CY Trash Bin,	29.00	MO	0	0	0	0	1,450	1,450	
			0.00	*0.00*	*2,482.50*	*0.00*		*8,482.50*	
Misc Project Expenses	**1.00**	**EA**	**0**	**0**	**2,483**	**0**	**6,000**	**8,483**	
			0.00	*0.00*	*16.55*	*0.00*		*16.55*	
RSM 015807000020 Project Signs, sign, Hi-intensity reflectorized, buy, excl. posts	150.00	SF	0	0	2,483	0	0	2,483	
			0.00	*0.00*	*0.00*	*0.00*		*300.00*	
USR Snow Removal	20.00	MO	0	0	0	0	6,000	6,000	
			8,838.81	*0.00*	*25,568.00*	*0.00*		*34,406.81*	
WINTERIZE PROJECT	**1.00**	**EA**	**8,839**	**0**	**25,568**	**0**	**0**	**34,407**	
			8,838.81	*0.00*	*25,568.00*	*0.00*		*34,406.81*	
Winterize Project	**1.00**	**EA**	**8,839**	**0**	**25,568**	**0**	**0**	**34,407**	
			0.00	*0.00*	*192.00*	*0.00*		*192.00*	
USR Rental, Heaters to 50 K-BTU/hr (Space) Oil, Gas or Lp Gas fired	29.00	MO	0	0	5,568	0	0	5,568	
(Note: Uses approx. 1.8 Lbs/hr. Lp Gas.)									
			220.97	*0.00*	*500.00*	*0.00*		*720.97*	
USR 85 Winterize - Buildings	20.00	MO	4,419	0	10,000	0	0	14,419	
			220.97	*0.00*	*500.00*	*0.00*		*720.97*	
USR 86 Winterize - Equipment	20.00	MO	4,419	0	10,000	0	0	14,419	
			0.00	*0.00*	*0.00*	*0.00*		*550,000.00*	
INSURANCE, INTEREST, PERMITS & FEES	**1.00**	**EA**	**0**	**0**	**0**	**0**	**550,000**	**550,000**	
			0.00	*0.00*	*0.00*	*0.00*		*550,000.00*	
Insurance Costs	**1.00**	**EA**	**0**	**0**	**0**	**0**	**550,000**	**550,000**	
USR Marine Insurance Premiums	1.00	LS	0	0	0	0	550,000	550,000	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
Job Office Overhead Bare to Direct Report											
Prime Dredging Contractor											
			4,094,479.39	*941,806.42%*	*219,938.77%*					*5,572,504.49*	
OVERHEAD ITEMS	**1.00**	**EA**	**4,094,479**	**941,806**	**219,939**	**0**	**0**	**216,715**	**99,565**	**5,572,504**	
			61,514.57	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*61,514.57*	
USR ST Small Tools	1.00	EA	61,515	0	0	0	0	0	0	61,515	
			940,486.08	*372,208.32%*	*12,769.39%*					*1,348,255.08*	
MOBILIZATION/DEMOBILIZATION	**1.00**	**EA**	**940,486**	**372,208**	**12,769**	**0**	**0**	**16,411**	**6,381**	**1,348,255**	
Mobilization	**1.00**	**LS**	**498,243**	**186,104**	**6,385**	**0**	**0**	**8,205**	**3,190**	**702,128**	
			145.43	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*213.71*	
USR SEA Mob/Demob SEA Mobilization/Demobilization	2,365.00	KM	343,947	147,406	5,396	0	0	6,253	2,427	505,429	
(Note: The Contractor will mob/demob the barge equipment from the Seattle area which is approximately 2,365km distance.)											
			124.55	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*183.03*	
USR ANC Mob/Demob ANC Mobilization/Demobilization	725.00	KM	90,296	38,698	989	0	0	1,952	764	132,699	
(Note: The Contractor will mob/demob the floating crane from the Anchorage area which is approximately 725km distance.)											
			800.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*800.00*	
USR Personnel Travel and Air Fare	80.00	EA	64,000	0	0	0	0	0	0	64,000	
(Note: The Contractor will mob/demob 10 highly skilled staff from the Seattle area. It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person. Each person will fly back to Seattle 4 times per year over the 2 year project duration. Quantity of roundtrips is 10 x 4 x 2 = 80)											
Demobilization	**1.00**	**LS**	**442,243**	**186,104**	**6,385**	**0**	**0**	**8,205**	**3,190**	**646,128**	
			145.43	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*213.71*	
USR SEA Mob/Demob SEA Mobilization/Demobilization	2,365.00	KM	343,947	147,406	5,396	0	0	6,253	2,427	505,429	
(Note: The Contractor will mob/demob the barge equipment from the Seattle area which is approximately 2,365km distance.)											
			124.55	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*183.03*	
USR ANC Mob/Demob ANC Mobilization/Demobilization	725.00	KM	90,296	38,698	989	0	0	1,952	764	132,699	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
(Note: The Contractor will mob/demob the floating crane from the Anchorage area which is approximately 725km distance.)											
			800.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*800.00*	
USR Personnel Travel and Air Fare	10.00	EA	8,000	0	0	0	0	0	0	8,000	
(Note: The Contractor will mob/demob 10 highly skilled staff from the Seattle area. It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person.)											
			3,092,478.74	*569,598.10%*	*207,169.38%*					*4,162,734.85*	
JOB OFFICE OVERHEAD	**1.00**	**EA**	**3,092,479**	**569,598**	**207,169**	**0**	**0**	**200,305**	**93,184**	**4,162,735**	
			962,862.82	*260,769.78%*	*87,345.63%*					*1,435,146.09*	
SUPERVISION AND MANAGEMENT	**1.00**	**EA**	**962,863**	**260,770**	**87,346**	**0**	**0**	**84,879**	**39,289**	**1,435,146**	
			469,993.33	*201,425.71%*	*87,361.79%*					*882,948.70*	
Supervision Personnel	**1.00**	**EA**	**469,993**	**201,426**	**87,362**	**0**	**0**	**84,879**	**39,289**	**882,949**	
			8,103.33	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*15,223.25*	
HNC FA-AGENS General Superintendents (P.M.)	29.00	MO	234,997	100,713	43,681	0	0	42,439	19,645	441,474	
(Note: Assumed a Carpenter / Millwright Wages plus $3.00 / hour)											
			8,103.33	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*15,223.25*	
HNC FA-AGENS General Labor Foreman	29.00	MO	234,997	100,713	43,681	0	0	42,439	19,645	441,474	
(Note: Assumed a Carpenter / Millwright Wages plus $3.00 / hour)											
			138,469.48	*59,344.06%*	*16.15%-*					*197,797.39*	
Management Vehicles	**1.00**	**EA**	**138,469**	**59,344**	**16-**	**0**	**0**	**0**	**0**	**197,797**	
			2,387.40	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*3,410.30*	
MAP T50XX005 TRUCK, HIGHWAY, CONVENTIONAL, 3/4 TON PICKUP, 4X4	29.00	MO	69,235	29,672	8-	0	0	0	0	98,899	
			2,387.40	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*3,410.30*	
MAP T50XX005 TRUCK, HIGHWAY, CONVENTIONAL, 3/4 TON PICKUP, 4X4	29.00	MO	69,235	29,672	8-	0	0	0	0	98,899	
			354,400.00	*0.00%*	*0.00%*					*354,400.00*	
Management Subsistance and Travel	**1.00**	**EA**	**354,400**	**0**	**0**	**0**	**0**	**0**	**0**	**354,400**	

Labor ID: LNS2009 EQ ID: EP07R09 | Currency in US dollars | TRACES MII Version 4.0

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
			800.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*800.00*	
USR Home Office Execs Travel to Job	8.00	EA	6,400	0	0	0	0	0	0	6,400	
(Note: It is assumed a roundtrip plane ticket from Seattle to Valdez is $800 per person. Assume travel once each quarter = 8 times total.)											
			400.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*400.00*	
USR Daily Subsistence (Per Man Day)	870.00	DAY	348,000	0	0	0	0	0	0	348,000	
(Note: It is assumed that per diem in Valdez will be $200 per supervisor person. Cost: 2 persons x $200 = $400 per day. (29 months = 870 days))											
			1,287,696.92	*217,394.11%*	*83,377.16%*					*1,703,949.97*	
ADMINISTRATION JOB OFFICE	**1.00**	**EA**	**1,287,697**	**217,394**	**83,377**	**0**	**0**	**77,978**	**37,504**	**1,703,950**	
			325,476.67	*139,490.00%*	*62,283.28%*					*612,921.33*	
Field Office Administration Personnel	**1.00**	**EA**	**325,477**	**139,490**	**62,283**	**0**	**0**	**57,661**	**28,011**	**612,921**	
			3,998.80	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*7,551.14*	
HNC FB-ACONT Contract Administrators	29.00	MO	115,965	49,699	22,541	0	0	20,640	10,137	218,983	
(Note: Assumed a Occupation Code of #01013 Accounting Clerk III)											
			4,291.73	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*8,126.41*	
HNC FB-OMANGR Office Managers	29.00	MO	124,460	53,340	24,564	0	0	22,255	11,047	235,666	
(Note: Assumed a Occupation Code of #01400 Supply Technician +3.00 w/ nonething better)											
			2,932.80	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*5,457.67*	
HNC FB-CLTYP Clerks, Typists, Bookkeepers & Receptionist	29.00	MO	85,051	36,451	15,179	0	0	14,766	6,826	158,272	
(Note: Assumed a Occupation Code of #01116 General Clerk)											
			61,902.37	*26,529.59%*	*5.85%-*					*88,426.12*	
Field Office Vehicles	**1.00**	**EA**	**61,902**	**26,530**	**6-**	**0**	**0**	**0**	**0**	**88,426**	
			2,134.56	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*3,049.18*	
MAP T50XX001 TRUCK, HIGHWAY, CONVENTIONAL, 1/2 TON PICKUP, 4X2	29.00	MO	61,902	26,530	6-	0	0	0	0	88,426	
			64,481.83	*11,201.93%*	*4,260.79%*					*85,926.29*	
Field Office Buildings & Supplies	**1.00**	**EA**	**64,482**	**11,202**	**4,261**	**0**	**0**	**4,066**	**1,916**	**85,926**	
			293.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*293.00*	

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
RSM 015205000450 Office Trailer, furnished, rent per month, 50' x 10', excl. hookups	29.00	MO	8,497	0	0	0	0	0	0	8,497	
			293.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*293.00*	
RSM 015205000450 Office Trailer, furnished, rent per month, 50' x 10', excl. hookups	29.00	MO	8,497	0	0	0	0	0	0	8,497	
			100.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*142.86*	
USR Office Equipment & Furniture	29.00	MO	2,900	1,243	0	0	0	0	0	4,143	
			17,000.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*17,000.00*	
USR Office - Supplies Assume 5% of Office Labor costs.	1.00	MO	17,000	0	0	0	0	0	0	17,000	
			150.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*150.00*	
USR Mailing, Shipping Cost	29.00	MO	4,350	0	0	0	0	0	0	4,350	
			801.30	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*1,497.91*	
USR 22 Hired Janitors, for 2 hr/night * 22 day / month = 44 hr/month	29.00	MO	23,238	9,959	4,261	0	0	4,066	1,916	43,439	
(Note: = 44 hr/month)											
			103,273.09	*39,974.18%*	*16,767.87%*					*183,729.63*	
Field Office Security Personnel	**1.00**	**EA**	**103,273**	**39,974**	**16,768**	**0**	**0**	**16,170**	**7,545**	**183,730**	
			3,109.60	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*5,804.88*	
HNC FD-SECWT Security, Watchmen/Guards	29.00	MO	90,178	38,648	16,400	0	0	15,740	7,375	168,341	
			26.19	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*30.78*	
RSM 028201300500 Chain link fence, industrial, galvanized steel, 6 ga. wire, 2" posts @ 10' OC,, 6' high, includes excavation	500.00	LF	13,095	1,326	368	0	0	430	169	15,388	
			696,000.00	*0.00%*	*0.00%*					*696,000.00*	
Field Office Subsistance and Travel	**1.00**	**EA**	**696,000**	**0**	**0**	**0**	**0**	**0**	**0**	**696,000**	
			800.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*800.00*	
USR Daily Subsistence (Per Man Day)	870.00	DAY	696,000	0	0	0	0	0	0	696,000	
(Note: It is assumed that per diem in Valdez will be $100 per field person. Cost: 8 persons x $100 = $800 per day. (29 months = 870 days))											

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
			10,462.96	*198.41%*	*71.06%*					*10,846.60*	
Field Office Utility Installation	**1.00**	**EA**	**10,463**	**198**	**71**	**0**	**0**	**82**	**32**	**10,847**	
			731.48	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*923.30*	
RSM 015100500890 Temporary electrical power equipment (pro-rated per job), connections, office trailer, 200 amp	1.00	EA	731	99	36	0	0	41	16	923	
			731.48	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*923.30*	
RSM 015100500890 Temporary electrical power equipment (pro-rated per job), connections, office trailer, 200 amp	1.00	EA	731	99	36	0	0	41	16	923	
			500.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*500.00*	
USR Install Telephone	2.00	EA	1,000	0	0	0	0	0	0	1,000	
			1,500.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1,500.00*	
USR Install Water Supply	2.00	EA	3,000	0	0	0	0	0	0	3,000	
			2,500.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*2,500.00*	
USR Install Sewer Connection	2.00	EA	5,000	0	0	0	0	0	0	5,000	
			26,100.00	*0.00%*	*0.00%*					*26,100.00*	
Field Office Utility Usage Fees	**1.00**	**EA**	**26,100**	**0**	**0**	**0**	**0**	**0**	**0**	**26,100**	
			500.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*500.00*	
USR Office Telephone including Long Distance	29.00	MO	14,500	0	0	0	0	0	0	14,500	
			200.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*200.00*	
USR Office Temporary Power / Lighting	29.00	MO	5,800	0	0	0	0	0	0	5,800	
			75.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*75.00*	
USR Garbage Service	29.00	MO	2,175	0	0	0	0	0	0	2,175	
			75.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*75.00*	
USR Water Usage Fees	29.00	MO	2,175	0	0	0	0	0	0	2,175	
			50.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*50.00*	
USR Sewer Usage Fees	29.00	MO	1,450	0	0	0	0	0	0	1,450	
			47,078.40	*17,090.74%*	*7,048.65%*					*81,029.03*	

Currency in US dollars

Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
ENGINEERING AND SURVEYING	**1.00**	**EA**	**47,078**	**17,091**	**7,049**	**0**	**0**	**6,641**	**3,170**	**81,029**	
			47,078.40	*17,090.74%*	*7,048.65%*					*81,029.03*	
Field Engineering	**1.00**	**EA**	**47,078**	**17,091**	**7,049**	**0**	**0**	**6,641**	**3,170**	**81,029**	
			6,146.40	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*11,590.55*	
HNC FC-ENGPE Engineers, Project	6.00	MO	36,878	15,805	7,049	0	0	6,641	3,170	69,543	
(Note: Assumed a Occupation Code of #29086 Engineer Technician IV)											
			100.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*100.00*	
USR Mailing, Shipping Drawing and Submittal cost	6.00	MO	600	0	0	0	0	0	0	600	
			1,100.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1,100.00*	
USR Engineering - Plans & Supplies Assume 5% of Labor cost.	6.00	MO	6,600	0	0	0	0	0	0	6,600	
			500.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*714.29*	
USR Engineering - Equipment	6.00	MO	3,000	1,286	0	0	0	0	0	4,286	
			103,896.00	*44,526.86%*	*18,963.16%*					*194,435.00*	
QUALITY CONTROL AND TESTING	**1.00**	**EA**	**103,896**	**44,527**	**18,963**	**0**	**0**	**18,521**	**8,528**	**194,435**	
			103,896.00	*44,526.86%*	*18,963.16%*					*194,435.00*	
Quality Control Personnel	**1.00**	**EA**	**103,896**	**44,527**	**18,963**	**0**	**0**	**18,521**	**8,528**	**194,435**	
			5,194.80	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*9,721.75*	
HNC FC-ENGQC Engineers, Quality Control	10.00	MO	51,948	22,263	9,482	0	0	9,260	4,264	97,217	
(Note: Assumed a Occupation Code of #29086 Engineer Technician III)											
			5,194.80	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*9,721.75*	
HNC FC-INSPE Inspectors	10.00	MO	51,948	22,263	9,482	0	0	9,260	4,264	97,217	
(Note: Assumed a Occupation Code of #29063 Drafter II)											
			36,597.46	*310.91%*	*110.94%*					*37,197.82*	
SANITATION FAC & TEMP BLDGS	**1.00**	**EA**	**36,597**	**311**	**111**	**0**	**0**	**129**	**50**	**37,198**	
			17,400.00	*0.00%*	*0.00%*					*17,400.00*	
Sanitation Facilities	**1.00**	**EA**	**17,400**	**0**	**0**	**0**	**0**	**0**	**0**	**17,400**	

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
			600.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*600.00*	
HNC 015205001400 Toilet, portable, chemical, rent per month	29.00	MO	17,400	0	0	0	0	0	0	17,400	
(Note: Assume 6 toilets at $100/toilet/mo = 6 x $100 x 29 = $17,000)											
			19,197.46	*310.91%*	*110.94%*					*19,797.82*	
Temporary Buildings	**1.00**	**EA**	**19,197**	**311**	**111**	**0**	**0**	**129**	**50**	**19,798**	
			109.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*109.00*	
RSM 015205001350 Storage Boxes, rent per month, 40' x 8'	29.00	MO	3,161	0	0	0	0	0	0	3,161	
			109.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*109.00*	
RSM 015205001350 Storage Boxes, rent per month, 40' x 8'	29.00	MO	3,161	0	0	0	0	0	0	3,161	
			4,291.82	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*4,491.94*	
USR 015901161 8'X 8'X 8'H(64 SF) Job Shack on skids. Site made.	3.00	EA	12,875	311	111	0	0	129	50	13,476	
			73,942.75	*27,432.96%*	*9,584.25%*					*126,570.12*	
PROJECT UTILITIES SITE & CLEANUP	**1.00**	**EA**	**73,943**	**27,433**	**9,584**	**0**	**0**	**11,300**	**4,310**	**126,570**	
			65,460.25	*27,432.96%*	*9,584.25%*					*118,087.62*	
Site Cleanup	**1.00**	**EA**	**65,460**	**27,433**	**9,584**	**0**	**0**	**11,300**	**4,310**	**118,088**	
			2,207.25	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*4,021.99*	
USR 84 Daily Site Cleanup, 1 laborer * 2 hrs/day * 22 day/mo = 44mhrs	29.00	MO	64,010	27,433	9,584	0	0	11,300	4,310	116,638	
			50.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*50.00*	
USR Rental, Dumpster 20CY Trash Bin,	29.00	MO	1,450	0	0	0	0	0	0	1,450	
			8,482.50	*0.00%*	*0.00%*					*8,482.50*	
Misc Project Expenses	**1.00**	**EA**	**8,483**	**0**	**0**	**0**	**0**	**0**	**0**	**8,483**	
			16.55	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*16.55*	
RSM 015807000020 Project Signs, sign, Hi-intensity reflectorized, buy, excl. posts	150.00	SF	2,483	0	0	0	0	0	0	2,483	
			300.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*300.00*	
USR Snow Removal	20.00	MO	6,000	0	0	0	0	0	0	6,000	

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Description	Quantity	UOM	BareCost	Productivity	Overtime	TaxAdj	MiscDirect	Payroll	WCI	DirectCost	C/O
			30,404.40	*2,072.74%*	*739.60%*					*34,406.81*	
WINTERIZE PROJECT	**1.00**	**EA**	**30,404**	**2,073**	**740**	**0**	**0**	**857**	**333**	**34,407**	
			30,404.40	*2,072.74%*	*739.60%*					*34,406.81*	
Winterize Project	**1.00**	**EA**	**30,404**	**2,073**	**740**	**0**	**0**	**857**	**333**	**34,407**	
			192.00	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*192.00*	
USR Rental, Heaters to 50 K-BTU/hr (Space) Oil, Gas or Lp Gas fired	29.00	MO	5,568	0	0	0	0	0	0	5,568	
(Note: Uses approx. 1.8 Lbs/hr. Lp Gas.)											
			620.91	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*720.97*	
USR 85 Winterize - Buildings	20.00	MO	12,418	1,036	370	0	0	429	166	14,419	
			620.91	*70.00%*	*16.67%*	*0.00%*	*0.00%*	*11.40%*	*7.50%*	*720.97*	
USR 86 Winterize - Equipment	20.00	MO	12,418	1,036	370	0	0	429	166	14,419	
			550,000.00	*0.00%*	*0.00%*					*550,000.00*	
INSURANCE, INTEREST, PERMITS & FEES	**1.00**	**EA**	**550,000**	**0**	**0**	**0**	**0**	**0**	**0**	**550,000**	
			550,000.00	*0.00%*	*0.00%*					*550,000.00*	
Insurance Costs	**1.00**	**EA**	**550,000**	**0**	**0**	**0**	**0**	**0**	**0**	**550,000**	
USR Marine Insurance Premiums	1.00	LS	550,000	0	0	0	0	0	0	550,000	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
Crews (Bare Costs) by Contractor, Report		**24,996.26**			**107,075.45**	**5,410,560.79**	**48,930.39**	**7,634,986.95**	**13,045,547.75**
Prime Dredging Contractor	**LaborCost1**	**24,996.26**		**0.00**	**107,075.45**	**5,410,560.79**	**48,930.39**	**7,634,986.95**	**13,045,547.75**
					1.00	*18.43*	*0.00*	*0.00*	*18.43*
CIV UFLDB 1 janitor	LaborCost1	1,801.24			1,801.24	33,196.89	0.00	0.00	33,196.89
FOP FB-JANTR Janitors			*Journeyman*	*18.43*	*1.00*	*18.43*			
					2.25	*120.91*	*0.00*	*0.00*	*120.91*
MIL ACARD 2 carpnters	LaborCost1	65.71			147.86	7,945.51	0.00	0.00	7,945.51
MIL B-CARPNTER Carpenters			*Journeyman*	*53.56*	*2.00*	*107.12*			
MIL B-CARPNTER Carpenters			*Foreman*	*55.16*	*0.25*	*13.79*			
					1.30	*61.80*	*0.00*	*0.00*	*61.80*
MIL ULABA 1 laborer	LaborCost1	1,479.59			1,923.47	91,443.21	0.00	0.00	91,443.21
MIL B-LABORER Laborers, (Semi-Skilled)			*Foreman*	*48.31*	*0.30*	*14.49*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*1.00*	*47.31*			
					1.00	*57.87*	*0.00*	*0.00*	*57.87*
RSM 1ELEC 1 ELEC	LaborCost1	11.43			11.43	661.37	0.00	0.00	661.37
MIL B-ELECTRN Electricians			*Journeyman*	*57.87*	*1.00*	*57.87*			
					1.50	*77.07*	*1.00*	*130.50*	*207.56*
RSM B10B B10B	LaborCost1	1,295.78			1,943.66	99,858.97	1,295.78	169,097.15	268,956.12
MIL B-EQOPRMED Equip. Operators, Medium			*Journeyman*	*53.41*	*1.00*	*53.41*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*0.50*	*23.66*			
MAP T15CA014 TRACTOR, CRAWLER (DOZER), 240 HP, LOW GROUND PRESSURE, W/7.70 CY STRAIGHT BLADE (ADD ATTACHMENTS)			*EP / Average*	*130.50*			*1.00*	*130.50*	
					1.50	*77.07*	*1.00*	*87.57*	*164.63*
RSM B10G B10G	LaborCost1	831.04			1,246.57	64,044.36	831.04	72,772.74	136,817.10
MIL B-EQOPRMED Equip. Operators, Medium			*Journeyman*	*53.41*	*1.00*	*53.41*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*0.50*	*23.66*			

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Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
MAP R45CA010 ROLLER, VIBRATORY, SELF-PROPELLED, DOUBLE DRUM, SMOOTH, 13.2 TON, 84" WIDE, 2X1, ASPHALT COMPACTOR			*EP / Average*	*87.57*			*1.00*	*87.57*	
					3.00	*145.48*	*2.00*	*40.20*	*185.68*
RSM B80C B80C	LaborCost1	23.81			71.43	3,463.81	47.62	957.18	4,420.99
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*2.00*	*94.62*			
MIL B-TRKDVRLT Truck Drivers, Light			*Journeyman*	*50.86*	*1.00*	*50.86*			
GEN L15Z4050 POST HOLE DRILL, UP TO 8" (203 MM) DIA, 30" (762 MM) DEEP, ONE MAN OPERATION			*EP / Average*	*1.50*			*1.00*	*1.50*	
GEN T50Z7360 TRUCK, HIGHWAY, 20,000 LBS (9,000 KG) GVW, 2 AXLE, 4X2 WITH FLATBED			*EP / Average*	*38.71*			*1.00*	*38.71*	
					14.00	*727.92*	*1.00*	*4.16*	*732.08*
RSM C14C C14C	LaborCost1	2.83			39.57	2,057.48	2.83	11.76	2,069.24
MIL B-CEMTFINR Cement Finishers			*Journeyman*	*52.08*	*1.00*	*52.08*			
MIL B-CARPNTER Carpenters			*Foreman*	*55.16*	*1.00*	*55.16*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*4.00*	*189.24*			
MIL B-RODMAN Rodmen, (Reinforcing)			*Journeyman*	*55.04*	*2.00*	*110.08*			
MIL B-CARPNTER Carpenters			*Journeyman*	*53.56*	*6.00*	*321.36*			
GEN XMEZ9520 CONCRETE VIBRATOR, 2.5" (63.5 MM) DIA, W/7.5 HP (5.6 KW) GENERATOR			*Non-EP / Average*	*4.16*			*1.00*	*4.16*	
					3.00	*151.89*	*4.00*	*1,093.58*	*1,245.47*
USR ANC Mob/Demob ANC Mob/Demob	LaborCost1	207.14			621.43	31,462.93	828.57	226,526.67	257,989.59
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*1.00*	*55.94*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*1.00*	*47.31*			
GEN B25Z1065 BUCKET, CLAMSHELL, 2.4 CY(1.8 M3) GENERAL PURPOSE, SQUARE NOSE (ADD TEETH WEAR COST)			*EP / Average*	*13.22*			*1.00*	*13.22*	

Currency in US dollars

Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)			*Non-EP / Average*	*92.00*			*1.00*	*92.00*	
GEN C85Z2398 CRANE, MECHANICAL, LATTICE BOOM, CRAWLER, DRAGLINE/CLAMSHELL, 2.5 CY (1.9 M3), 60 TON (54 MT), 50' (15.2 M) BOOM (ADD BUCKET)			*EP / Standby*	*38.35*			*1.00*	*38.35*	
USR XX0XX630 TOWING VESSEL TUG, 3000 HP 0			*Non-EP / Average*	*950.00*			*1.00*	*950.00*	
					8.25	*403.43*	*4.00*	*568.70*	*972.13*
USR Dredge Dredging Crew	LaborCost1	1,474.65			12,165.90	594,912.44	5,898.62	838,639.58	1,433,552.02
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*1.25*	*69.93*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Foreman*	*48.31*	*1.00*	*48.31*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*5.00*	*236.55*			
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)			*Non-EP / Average*	*92.00*			*1.00*	*92.00*	
USR XX0XX610 WORK TUG, 1000 HP 0			*Non-EP / Standby*	*46.73*			*0.75*	*35.05*	
USR XX0XX610 WORK TUG, 1000 HP 0			*Non-EP / Average*	*516.72*			*0.25*	*129.18*	
MAP C85MA003 CRANES, MECHANICAL, LATTICE BOOM, CRAWLER, DRAGLINE/CLAMSHELL, 7.0 CY, 140' BOOM (ADD BUCKET)			*EP / Average*	*288.80*			*1.00*	*288.80*	
EP B25XX019 BUCKET, CLAMSHELL, 7.5 CY, SQUARE NOSE, STANDARD			*EP / Severe*	*23.68*			*1.00*	*23.68*	
					8.00	*388.44*	*4.00*	*871.68*	*1,260.12*
USR Dump Scow Dump Scow & Tug Crew	LaborCost1	1,217.09			9,736.70	472,765.56	4,868.35	1,060,911.03	1,533,676.59
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*1.00*	*55.94*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*6.00*	*283.86*			

Currency in US dollars

Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
USR XX0XX610 WORK TUG, 1000 HP 0			*Non-EP / Average*	*516.72*			*1.00*	*516.72*	
USR XX0XX800 DUMP SCOW BARGE, 1,500 CY APPROX. 200'x 50' x 15'			*Non-EP / Average*	*118.32*			*3.00*	*354.96*	
					4.00	*199.20*	*1.00*	*152.48*	*351.68*
USR Off Load Dredged Material Off Load Crew	LaborCost1	991.27			3,965.07	197,460.70	991.27	151,147.92	348,608.62
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*1.00*	*55.94*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*2.00*	*94.62*			
EP C75TD008 CRANES, HYDRAULIC, SELF-PROPELLED, ROUGH TERRAIN, 65 TON, 180' BOOM, 4X4			*EP / Average*	*152.48*			*1.00*	*152.48*	
					11.00	*548.96*	*7.00*	*1,123.70*	*1,672.66*
USR Rock Rock Placement Crew	LaborCost1	2,358.11			25,939.21	1,294,508.30	16,506.77	2,649,819.21	3,944,327.51
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*2.00*	*97.28*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*6.00*	*283.86*			
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*3.00*	*167.82*			
EP B25XX014 BUCKET, CLAMSHELL, 5.0 CY, SQUARE NOSE, STANDARD			*EP / Average*	*13.21*			*1.00*	*13.21*	
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)			*Non-EP / Average*	*92.00*			*1.00*	*92.00*	
USR XX0XX610 WORK TUG, 1000 HP 0			*Non-EP / Average*	*516.72*			*0.50*	*258.36*	
USR XX0XX610 WORK TUG, 1000 HP 0			*Non-EP / Standby*	*46.73*			*0.50*	*23.37*	
USR XX0XX800 DUMP SCOW BARGE, 1,500 CY APPROX. 200'x 50' x 15'			*Non-EP / Average*	*118.32*			*2.00*	*236.64*	
MAP C85MA003 CRANES, MECHANICAL, LATTICE BOOM, CRAWLER, DRAGLINE/CLAMSHELL, 7.0 CY, 140' BOOM (ADD BUCKET)			*EP / Average*	*288.80*			*1.00*	*288.80*	

Currency in US dollars

Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
EP H25CA030 HYDRAULIC EXCAVATOR, CRAWLER, 175,500 LBS, 5.00 CY BUCKET, 34.75' MAX DIGGING DEPTH			*EP / Average*	*211.33*			*1.00*	*211.33*	
					3.00	*149.36*	*4.00*	*1,304.96*	*1,454.32*
USR SEA Mob/Demob SEA Mob/Demob	LaborCost1	675.71			2,027.14	100,924.69	2,702.86	881,780.11	982,704.80
MIL B-EQOPRMED Equip. Operators, Medium			*Journeyman*	*53.41*	*1.00*	*53.41*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*1.00*	*47.31*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
USR XX0XX800 DUMP SCOW BARGE, 1,500 CY APPROX. 200'x 50' x 15'			*Non-EP / Average*	*118.32*			*3.00*	*354.96*	
USR XX0XX630 TOWING VESSEL TUG, 3000 HP 0			*Non-EP / Average*	*950.00*			*1.00*	*950.00*	
Utility Subcontractor	**LaborCost1**	**917.41**		**0.00**	**4,183.84**	**234,952.46**	**3,897.05**	**951,199.74**	**1,186,152.19**
					2.50	*146.54*	*0.00*	*0.00*	*146.54*
RSM R19 R19	LaborCost1	2.86			7.14	418.69	0.00	0.00	418.69
MIL B-ELECTRN Electricians			*Journeyman*	*57.87*	*2.00*	*115.74*			
MIL B-ELECTRN Electricians			*Foreman*	*61.60*	*0.50*	*30.80*			
					9.00	*559.41*	*5.00*	*768.97*	*1,328.38*
USR Splice Underwater Splice Crew	LaborCost1	238.84			2,149.55	133,609.08	1,194.20	183,659.95	317,269.03
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*2.00*	*94.62*			
MIL B-EQOPRLT Equip. Operators, Light			*Journeyman*	*52.69*	*1.00*	*52.69*			
MIL X-DIVER Outside Divers			*Journeyman*	*85.75*	*1.00*	*85.75*			
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*1.00*	*55.94*			
MIL B-ELECTRN Electricians			*Journeyman*	*57.87*	*2.00*	*115.74*			
MIL X-DIVER Outside Divers			*Foreman*	*93.07*	*1.00*	*93.07*			
MIL B-ELECTRN Electricians			*Foreman*	*61.60*	*1.00*	*61.60*			
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)			*Non-EP / Average*	*92.00*			*1.00*	*92.00*	
USR XX0XX600 WORK TUG, UNDER 500 HP 0			*Non-EP / Average*	*371.74*			*1.00*	*371.74*	

Currency in US dollars

Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
EP H25CA030 HYDRAULIC EXCAVATOR, CRAWLER, 175,500 LBS, 5.00 CY BUCKET, 34.75' MAX DIGGING DEPTH			*EP / Average*	*211.33*			*1.00*	*211.33*	
EP M10SM004 MARINE EQUIPMENT, BOATS & LAUNCHES, 23' LITTLE GIANT, W/CABIN TRI-HULL, CAP 3,400 LBS, OUTBOARD, 23.4' X 8.5' X 1.2'			*EP / Average*	*78.17*			*1.00*	*78.17*	
MAP T10CA023 TRACTOR ATTACHMENTS, POWER WINCH, W/CABLE, FOR D9 (ADD D9 TRACTOR)			*EP / Average*	*15.72*			*1.00*	*15.72*	
					3.00	*149.36*	*4.00*	*1,135.89*	*1,285.25*
USR Utility Mob/Demob Utility Mob/Demob	LaborCost1	675.71			2,027.14	100,924.69	2,702.86	767,539.79	868,464.47
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*1.00*	*47.31*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
MIL B-EQOPRMED Equip. Operators, Medium			*Journeyman*	*53.41*	*1.00*	*53.41*			
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)			*Non-EP / Average*	*92.00*			*1.00*	*92.00*	
EP M10SM004 MARINE EQUIPMENT, BOATS & LAUNCHES, 23' LITTLE GIANT, W/CABIN TRI-HULL, CAP 3,400 LBS, OUTBOARD, 23.4' X 8.5' X 1.2'			*EP / Average*	*78.17*			*1.00*	*78.17*	
MAP T10CA023 TRACTOR ATTACHMENTS, POWER WINCH, W/CABLE, FOR D9 (ADD D9 TRACTOR)			*EP / Average*	*15.72*			*1.00*	*15.72*	
USR XX0XX630 TOWING VESSEL TUG, 3000 HP 0			*Non-EP / Average*	*950.00*			*1.00*	*950.00*	
Harbor Subcontractor	**LaborCost1**	**11,597.72**		**0.00**	**41,113.78**	**2,175,468.96**	**10,968.21**	**628,471.20**	**2,803,940.17**
					3.00	*141.25*	*0.00*	*0.00*	*141.25*
RSM B20 B20	LaborCost1	778.57			2,335.71	109,973.21	0.00	0.00	109,973.21
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*1.00*	*47.31*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Foreman*	*48.31*	*1.00*	*48.31*			
MIL B-SKILLWKR Skilled Workers			*Journeyman*	*45.63*	*1.00*	*45.63*			

Currency in US dollars

Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
					4.75	*230.52*	*2.75*	*41.93*	*272.44*
RSM B22A B22A	LaborCost1	778.57			3,698.21	179,472.39	2,141.07	32,642.67	212,115.06
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*2.00*	*94.62*			
MIL B-SKILLWKR Skilled Workers			*Journeyman*	*45.63*	*1.00*	*45.63*			
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*0.75*	*41.96*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Foreman*	*48.31*	*1.00*	*48.31*			
MAP C75GV021 CRANES, HYDRAULIC, SELF-PROPELLED, YARD, 10 TON, 30' BOOM, 4X4, NON-ROTATING OPERATOR'S CAB			*EP / Average*	*39.03*			*0.75*	*29.27*	
GEN G10Z3063 GENERATOR SET, PORTABLE, 5.5 KW, 120/240V, 60HZ			*EP / Average*	*3.56*			*1.00*	*3.56*	
GEN XMEZ8805 BUTT FUSION MACHINE UP TO 20" (500 MM) PIPE, ADD 6KW 240 V GENERATOR			*Non-EP / Average*	*9.10*			*1.00*	*9.10*	
					1.00	*47.31*	*0.00*	*0.00*	*47.31*
RSM CLAB CLAB	LaborCost1	2,096.75			2,096.75	99,197.12	0.00	0.00	99,197.12
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*1.00*	*47.31*			
					13.00	*711.67*	*5.00*	*208.45*	*920.12*
RSM E8 E8	LaborCost1	57.14			742.86	40,666.86	285.71	11,911.66	52,578.52
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*1.00*	*55.94*			
MIL B-WELDERS Welders, Structural Steel			*Foreman*	*57.04*	*1.00*	*57.04*			
MIL B-EQOPRLT Equip. Operators, Light			*Journeyman*	*52.69*	*1.00*	*52.69*			
MIL B-STRSTEEL Structural Steel Workers			*Foreman*	*57.04*	*1.00*	*57.04*			
MIL B-STRSTEEL Structural Steel Workers			*Journeyman*	*55.04*	*4.00*	*220.16*			
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
MIL B-WELDERS Welders, Structural Steel			*Journeyman*	*55.04*	*4.00*	*220.16*			

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
GEN C80Z2310 CRANE, HYDRAULIC, TRUCK MOUNTED, 90 TON (81.6 MT), 114' (34.7 M) BOOM, 8X4			*EP / Average*	*161.77*			*1.00*	*161.77*	
GEN W35Z8640 WELDER, ENGINE DRIVEN, DIESEL, 300 AMP, TRAILER MOUNTED			*EP / Average*	*11.67*			*4.00*	*46.68*	
					1.00	*57.87*	*0.00*	*0.00*	*57.87*
RSM ELEC ELEC	LaborCost1	2,285.71			2,285.71	132,274.29	0.00	0.00	132,274.29
MIL B-ELECTRN Electricians			*Journeyman*	*57.87*	*1.00*	*57.87*			
					5.00	*270.18*	*1.00*	*76.63*	*346.81*
RSM F3 F3	LaborCost1	4,477.61			22,388.06	1,209,761.19	4,477.61	343,101.78	1,552,862.98
MIL B-CARPNTER Carpenters			*Journeyman*	*53.56*	*4.00*	*214.24*			
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*1.00*	*55.94*			
MAP C80TE005 CRANES, HYDRAULIC, TRUCK MTD, ALL TERRAIN, 20 TON, 94' BOOM, 6X4X2			*EP / Average*	*76.63*			*1.00*	*76.63*	
					4.66	*251.02*	*0.00*	*0.00*	*251.02*
RSM R22 R22	LaborCost1	615.38			2,867.69	154,471.38	0.00	0.00	154,471.38
MIL B-ELECTRN Electricians			*Journeyman*	*57.87*	*2.00*	*115.74*			
MIL B-ELECTRN Electricians			*Foreman*	*61.60*	*0.66*	*40.66*			
MIL B-LABORER Laborers, (Semi-Skilled)			*Journeyman*	*47.31*	*2.00*	*94.62*			
					9.25	*491.47*	*8.00*	*474.07*	*965.53*
USR Pile Driver Steel Pile Driving Crew	LaborCost1	507.98			4,698.78	249,652.52	4,063.81	240,815.09	490,467.60
MIL B-EQOPROIL Equip. Operators, Oilers / Grade Checker			*Journeyman*	*48.64*	*1.00*	*48.64*			
MIL B-EQOPRCRN Equip. Operators, Heavy			*Journeyman*	*55.94*	*2.25*	*125.87*			
MIL B-PILEDRVR Pile Drivers			*Foreman*	*54.16*	*1.00*	*54.16*			
MIL B-PILEDRVR Pile Drivers			*Journeyman*	*52.56*	*5.00*	*262.80*			
GEN A15Z0160 AIR COMPRESSOR, 600 CFM (17 CMM), 100 PSI (689 KPA) (ADD HOSE)			*EP / Average*	*54.62*			*1.00*	*54.62*	
GEN A20Z0490 AIR HOSE, 3.0" (76 MM) DIA x 100' (31 M) LENGTH, HARDROCK (USE AS DRILLING ACCESSORY)			*EP / Average*	*4.53*			*2.00*	*9.05*	

Currency in US dollars

Description	LaborRate	CrewHours	MemberType	MemberRate	ManHours	LaborCost	EQHours	EQCost	CrewCost
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)			*Non-EP / Average*	*92.00*			*1.00*	*92.00*	
EP C85LB013 CRANES, MECHANICAL, LATTICE BOOM, CRAWLER, 80 TON, 190' BOOM, LIFTING			*EP / Average*	*118.81*			*1.00*	*118.81*	
USR XX0XX610 WORK TUG, 1000 HP 0			*Non-EP / Standby*	*46.73*			*0.75*	*35.05*	
USR XX0XX610 WORK TUG, 1000 HP 0			*Non-EP / Average*	*516.72*			*0.25*	*129.18*	
GEN P10Z4840 PILE HAMMER ACCESSORIES, PILE LEADS, SWING 26" (660 MM) x 8" (660 MM), 86' (26.2 M) LENGTH			*EP / Average*	*5.56*			*1.00*	*5.56*	
MAP P25VU002 PILE HAMMER, SINGLE ACTING, PNUEMATIC (STEAM/AIR), 18,000 FT-LBS (ADD 750 CFM COMPRESSOR, LEADS & CRANE)			*EP / Average*	*29.80*			*1.00*	*29.80*	
Surveyor Subcontractor	**LaborCost1**	**45.71**		**0.00**	**137.14**	**5,433.14**	**91.43**	**3,652.68**	**9,085.82**
					3.00	*118.85*	*2.00*	*79.90*	*198.75*
USR A7 A7	LaborCost1	45.71			137.14	5,433.14	91.43	3,652.68	9,085.82
MIL X-RODMAN Outside Rodmen			*Journeyman*	*55.04*	*1.00*	*55.04*			
FOP FC-SURYR Surveyors			*Journeyman*	*28.35*	*1.00*	*28.35*			
FOP FC-FLDER Field Engineers			*Journeyman*	*35.46*	*1.00*	*35.46*			
EP M10SM004 MARINE EQUIPMENT, BOATS & LAUNCHES, 23' LITTLE GIANT, W/CABIN TRI-HULL, CAP 3,400 LBS, OUTBOARD, 23.4' X 8.5' X 1.2'			*EP / Average*	*78.17*			*1.00*	*78.17*	
GEN XMEZ8815 LASER LEVEL FOR PIPES			*Non-EP / Average*	*1.73*			*1.00*	*1.73*	

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

Description	SUIExperience	SUIRate	FICA	FUIRate	PayrollTax	State	ContractorCla	WCIBaseRate	WCIExperience	WCIRate
Contractors Labor Payroll Markup Report										
1 Prime Dredging Contractor	**80.00**	**2.95**	**7.65**	**0.80**	**11.40**	**AK**	**Excavation -- rock/earth NOC**	**8.82**	**85.00**	**7.50**
1.2 Utility Subcontractor	**80.00**	**2.95**	**7.65**	**0.80**	**11.40**	**AK**	**Excavation -- rock/earth NOC**	**8.82**	**85.00**	**7.50**
1.3 Harbor Subcontractor	**80.00**	**2.95**	**7.65**	**0.80**	**11.40**	**AK**	**Carpentry -- general**	**9.30**	**85.00**	**7.91**
1.4 Surveyor Subcontractor	**80.00**	**2.95**	**7.65**	**0.80**	**11.40**	**AK**	**Excavation -- rock/earth NOC**	**8.82**	**85.00**	**7.50**

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Description	LaborRate	LaborType	ManHours	BaseWage	Travel	TaxableFringe	NonTaxFringe	Subsistence	Payroll	WCI	Overtime	Total
Labor by Contractor, Report												
Prime Dredging Contractor												
				35.93	*0.00*	*18.23*	*1.00*	*0.00*				*71.76*
Carpenters	LaborCost1	Foreman	19	692	0	351	19	0	152	52	115	1,382
				34.33	*0.00*	*18.23*	*1.00*	*0.00*				*69.48*
Carpenters	LaborCost1	Journeyman	148	5,094	0	2,705	148	0	1,131	382	849	10,310
				34.68	*0.00*	*16.40*	*1.00*	*0.00*				*66.94*
Cement Finishers	LaborCost1	Journeyman	3	98	0	46	3	0	18	7	16	189
				12.68	*0.00*	*3.24*	*1.00*	*0.00*				*22.04*
Clerks, Typists, Bookkeepers & Receptionist	LaborCost1	Journeyman	7,181	91,054	0	23,266	7,181	0	14,766	6,826	15,179	158,272
				18.83	*0.00*	*3.24*	*1.00*	*0.00*				*30.49*
Contract Administrators	LaborCost1	Journeyman	7,181	135,217	0	23,266	7,181	0	20,640	10,137	22,541	218,983
				37.30	*0.00*	*19.57*	*1.00*	*0.00*				*74.43*
Electricians	LaborCost1	Journeyman	11	426	0	224	11	0	86	32	71	851
				28.46	*0.00*	*6.00*	*1.00*	*0.00*				*46.81*
Engineers, Project	LaborCost1	Journeyman	1,486	42,283	0	8,914	1,486	0	6,641	3,170	7,049	69,543
				22.97	*0.00*	*6.00*	*1.00*	*0.00*				*39.26*
Engineers, Quality Control	LaborCost1	Journeyman	2,476	56,878	0	14,857	2,476	0	9,260	4,264	9,482	97,217
				37.99	*0.00*	*16.95*	*1.00*	*0.00*				*77.56*
Equip. Operators, Heavy	LaborCost1	Journeyman	11,333	430,546	0	192,097	11,333	0	141,012	32,278	71,772	879,039
				35.46	*0.00*	*16.95*	*1.00*	*0.00*				*69.35*
Equip. Operators, Medium	LaborCost1	Journeyman	2,803	99,378	0	47,503	2,803	0	20,648	7,450	16,566	194,348

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Description	LaborRate	LaborType	ManHours	BaseWage	Travel	TaxableFringe	NonTaxFringe	Subsistence	Payroll	WCI	Overtime	Total
				30.69	*0.00*	*16.95*	*1.00*	*0.00*				*67.01*
Equip. Operators, Oilers / Grade Checker	LaborCost1	Journeyman	9,282	284,867	0	157,331	9,282	0	101,707	21,357	47,487	622,032
				36.49	*0.00*	*9.26*	*1.00*	*0.00*				*61.83*
General Superintendents (P.M.)	LaborCost1	Journeyman	14,362	524,066	0	132,991	14,362	0	89,859	39,289	87,362	887,929
				22.97	*0.00*	*6.00*	*1.00*	*0.00*				*39.26*
Inspectors	LaborCost1	Journeyman	2,476	56,878	0	14,857	2,476	0	9,260	4,264	9,482	97,217
				14.19	*0.00*	*3.24*	*1.00*	*0.00*				*24.12*
Janitors	LaborCost1	Journeyman	1,801	25,560	0	5,836	1,801	0	4,066	1,916	4,261	43,439
				29.66	*0.00*	*16.65*	*1.00*	*0.00*				*67.05*
Laborers, (Semi-Skilled)	LaborCost1	Journeyman	34,292	1,017,094	0	570,958	34,292	0	430,979	76,252	169,550	2,299,124
				30.66	*0.00*	*16.65*	*1.00*	*0.00*				*61.83*
Laborers, (Semi-Skilled)	LaborCost1	Foreman	1,919	58,822	0	31,944	1,919	0	11,726	4,410	9,806	118,626
				20.52	*0.00*	*3.24*	*1.00*	*0.00*				*32.82*
Office Managers	LaborCost1	Journeyman	7,181	147,353	0	23,266	7,181	0	22,255	11,047	24,564	235,666
				34.40	*0.00*	*19.64*	*1.00*	*0.00*				*70.17*
Rodmen, (Reinforcing)	LaborCost1	Journeyman	6	194	0	111	6	0	39	15	32	397
				13.70	*0.00*	*3.24*	*1.00*	*0.00*				*23.44*
Security, Watchmen/Guards	LaborCost1	Journeyman	7,181	98,379	0	23,266	7,181	0	15,740	7,375	16,400	168,341
				35.56	*0.00*	*14.30*	*1.00*	*0.00*				*65.81*
Truck Drivers, Light	LaborCost1	Journeyman	24	847	0	340	24	0	151	63	141	1,567
Utility Subcontractor												
				12.68	*0.00*	*3.24*	*1.00*	*0.00*				*22.04*

Currency in US dollars

Description	LaborRate	LaborType	ManHours	BaseWage	Travel	TaxableFringe	NonTaxFringe	Subsistence	Payroll	WCI	Overtime	Total
Clerks, Typists, Bookkeepers & Receptionist	LaborCost1	Journeyman	229	2,898	0	741	229	0	470	217	483	5,038
				37.30	*0.00*	*19.57*	*1.00*	*0.00*				*74.78*
Electricians	LaborCost1	Journeyman	483	18,031	0	9,460	483	0	3,816	1,352	3,006	36,147
				41.03	*0.00*	*19.57*	*1.00*	*0.00*				*79.98*
Electricians	LaborCost1	Foreman	240	9,858	0	4,702	240	0	2,034	739	1,643	19,217
				42.12	*0.00*	*6.00*	*1.00*	*0.00*				*65.59*
Engineers, Electrical	LaborCost1	Journeyman	429	18,051	0	2,571	429	0	2,695	1,353	3,009	28,108
				37.99	*0.00*	*16.95*	*1.00*	*0.00*				*72.11*
Equip. Operators, Heavy	LaborCost1	Journeyman	239	9,074	0	4,048	239	0	1,669	680	1,513	17,222
				34.74	*0.00*	*16.95*	*1.00*	*0.00*				*67.64*
Equip. Operators, Light	LaborCost1	Journeyman	239	8,297	0	4,048	239	0	1,565	622	1,383	16,155
				35.46	*0.00*	*16.95*	*1.00*	*0.00*				*68.97*
Equip. Operators, Medium	LaborCost1	Journeyman	676	23,961	0	11,453	676	0	4,721	1,796	3,994	46,602
				30.69	*0.00*	*16.95*	*1.00*	*0.00*				*62.36*
Equip. Operators, Oilers / Grade Checker	LaborCost1	Journeyman	676	20,738	0	11,453	676	0	4,262	1,555	3,457	42,140
				29.66	*0.00*	*16.65*	*1.00*	*0.00*				*60.82*
Laborers, (Semi-Skilled)	LaborCost1	Journeyman	1,153	34,210	0	19,204	1,153	0	7,312	2,565	5,703	70,146
				74.82	*0.00*	*9.93*	*1.00*	*0.00*				*114.92*
Outside Divers	LaborCost1	Journeyman	239	17,870	0	2,372	239	0	2,648	1,340	2,979	27,447
				82.14	*0.00*	*9.93*	*1.00*	*0.00*				*124.98*
Outside Divers	LaborCost1	Foreman	239	19,618	0	2,372	239	0	2,880	1,471	3,270	29,850
				21.35	*0.00*	*6.00*	*1.00*	*0.00*				*37.03*
Surveyors	LaborCost1	Journeyman	429	9,150	0	2,571	429	0	1,510	686	1,525	15,872

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Description	LaborRate	LaborType	ManHours	BaseWage	Travel	TaxableFringe	NonTaxFringe	Subsistence	Payroll	WCI	Overtime	Total
				27.16	*0.00*	*6.00*	*1.00*	*0.00*				*45.02*
Surveyors, Chief	LaborCost1	Journeyman	229	6,208	0	1,371	229	0	982	465	1,035	10,290
Harbor Subcontractor												
				34.33	*0.00*	*18.23*	*1.00*	*0.00*				*68.64*
Carpenters	LaborCost1	Journeyman	17,910	614,866	0	326,507	17,910	0	119,022	48,605	102,498	1,229,409
				37.30	*0.00*	*19.57*	*1.00*	*0.00*				*74.48*
Electricians	LaborCost1	Journeyman	3,516	131,165	0	68,818	3,516	0	26,168	10,369	21,865	261,900
				41.03	*0.00*	*19.57*	*1.00*	*0.00*				*79.37*
Electricians	LaborCost1	Foreman	406	16,664	0	7,948	406	0	3,123	1,317	2,778	32,237
				37.99	*0.00*	*16.95*	*1.00*	*0.00*				*73.70*
Equip. Operators, Heavy	LaborCost1	Journeyman	6,262	237,879	0	106,135	6,262	0	52,729	18,804	39,654	461,464
				34.74	*0.00*	*16.95*	*1.00*	*0.00*				*67.78*
Equip. Operators, Light	LaborCost1	Journeyman	57	1,985	0	969	57	0	375	157	331	3,873
				30.69	*0.00*	*16.95*	*1.00*	*0.00*				*62.72*
Equip. Operators, Oilers / Grade Checker	LaborCost1	Journeyman	565	17,344	0	9,579	565	0	3,696	1,371	2,891	35,445
				29.66	*0.00*	*16.65*	*1.00*	*0.00*				*61.55*
Laborers, (Semi-Skilled)	LaborCost1	Journeyman	5,663	167,971	0	94,293	5,663	0	39,394	13,278	28,001	348,600
				30.66	*0.00*	*16.65*	*1.00*	*0.00*				*62.11*
Laborers, (Semi-Skilled)	LaborCost1	Foreman	1,557	47,742	0	25,926	1,557	0	9,761	3,774	7,959	96,719
				34.93	*0.00*	*18.23*	*1.00*	*0.00*				*69.47*
Pile Drivers	LaborCost1	Foreman	508	17,744	0	9,260	508	0	3,416	1,403	2,958	35,289
				33.33	*0.00*	*18.23*	*1.00*	*0.00*				*67.26*
Pile Drivers	LaborCost1	Journeyman	2,540	84,654	0	46,302	2,540	0	16,541	6,692	14,112	170,841
				35.24	*0.00*	*9.39*	*1.00*	*0.00*				*60.38*
Skilled Workers	LaborCost1	Journeyman	1,557	54,874	0	14,622	1,557	0	9,488	4,338	9,147	94,026

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Description	LaborRate	LaborType	ManHours	BaseWage	Travel	TaxableFringe	NonTaxFringe	Subsistence	Payroll	WCI	Overtime	Total
				36.40	*0.00*	*19.64*	*1.00*	*0.00*				*73.07*
Structural Steel Workers	LaborCost1	Foreman	57	2,080	0	1,122	57	0	405	164	347	4,175
				34.40	*0.00*	*19.64*	*1.00*	*0.00*				*70.31*
Structural Steel Workers	LaborCost1	Journeyman	229	7,863	0	4,489	229	0	1,558	622	1,311	16,071
				36.40	*0.00*	*19.64*	*1.00*	*0.00*				*73.07*
Welders, Structural Steel	LaborCost1	Foreman	57	2,080	0	1,122	57	0	405	164	347	4,175
				34.40	*0.00*	*19.64*	*1.00*	*0.00*				*70.31*
Welders, Structural Steel	LaborCost1	Journeyman	229	7,863	0	4,489	229	0	1,558	622	1,311	16,071
Surveyor Subcontractor												
				28.46	*0.00*	*6.00*	*1.00*	*0.00*				*47.08*
Field Engineers	LaborCost1	Journeyman	46	1,301	0	274	46	0	217	98	217	2,152
				34.40	*0.00*	*19.64*	*1.00*	*0.00*				*70.50*
Outside Rodmen	LaborCost1	Journeyman	46	1,573	0	898	46	0	327	118	262	3,223
				21.35	*0.00*	*6.00*	*1.00*	*0.00*				*37.24*
Surveyors	LaborCost1	Journeyman	46	976	0	274	46	0	170	73	163	1,702

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Description	CostType	ConditionType	Manufacturer	EQHours	Ownership	Operating	Total
Equipment by Contractor, Report				**70,473**	**1,969,474**	**5,647,937**	**7,617,411**
Prime Dredging Contractor				**70,473**	**1,969,474**	**5,647,937**	**7,617,411**
EP B25XX014 BUCKET, CLAMSHELL, 5.0 CY, SQUARE NOSE, STANDARD	EP	Average	XX NO SPECIFIC MANUFACTURER	2,358	*6.62* 15,602	*6.17* 14,546	*12.78* 30,148
EP B25XX019 BUCKET, CLAMSHELL, 7.5 CY, SQUARE NOSE, STANDARD	EP	Severe	XX NO SPECIFIC MANUFACTURER	1,475	*10.45* 15,413	*12.03* 17,742	*22.48* 33,155
EP C75TD008 CRANES, HYDRAULIC, SELF-PROPELLED, ROUGH TERRAIN, 65 TON, 180' BOOM, 4X4	EP	Average	TD TADANO AMERICA CORPORATION	991	*42.19* 41,821	*99.96* 99,087	*142.15* 140,908
EP H25CA030 HYDRAULIC EXCAVATOR, CRAWLER, 175,500 LBS, 5.00 CY BUCKET, 34.75' MAX DIGGING DEPTH	EP	Average	CA CATERPILLAR INC. (MACHINE DIVISION)	2,358	*62.19* 146,640	*139.65* 329,300	*201.83* 475,940
GEN B25Z1065 BUCKET, CLAMSHELL, 2.4 CY(1.8 M3) GENERAL PURPOSE, SQUARE NOSE (ADD TEETH WEAR COST)	EP	Average	ZZ GENERIC EQUIPMENT	207	*6.63* 1,373	*6.18* 1,280	*12.80* 2,652
GEN C85Z2398 CRANE, MECHANICAL, LATTICE BOOM, CRAWLER, DRAGLINE/CLAMSHELL, 2.5 CY (1.9 M3), 60 TON (54 MT), 50' (15.2 M) BOOM (ADD BUCKET)	EP	Standby	ZZ GENERIC EQUIPMENT	207	*31.93* 6,613	*0.00* 0	*31.93* 6,613
GEN L15Z4050 POST HOLE DRILL, UP TO 8" (203 MM) DIA, 30" (762 MM) DEEP, ONE MAN OPERATION	EP	Average	ZZ GENERIC EQUIPMENT	24	*0.26* 6	*1.23* 29	*1.49* 35
GEN T50Z7360 TRUCK, HIGHWAY, 20,000 LBS (9,000 KG) GVW, 2 AXLE, 4X2 WITH FLATBED	EP	Average	ZZ GENERIC EQUIPMENT	24	*3.74* 89	*34.62* 824	*38.36* 913
GEN XMEZ9520 CONCRETE VIBRATOR, 2.5" (63.5 MM) DIA, W/7.5 HP (5.6 KW) GENERATOR	Non-EP	Average	ZZ GENERIC EQUIPMENT	3	*0.62* 2	*3.53* 10	*4.15* 12
MAP C85MA003 CRANES, MECHANICAL, LATTICE BOOM, CRAWLER, DRAGLINE/CLAMSHELL, 7.0 CY, 140' BOOM (ADD BUCKET)	EP	Average	MA MANITOWOC ENGINEERING CO.	3,833	*96.67* 370,504	*171.22* 656,253	*267.89* 1,026,758

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Description	CostType	ConditionType	Manufacturer	EQHours	Ownership	Operating	Total
					22.75	*63.12*	*85.87*
MAP R45CA010 ROLLER, VIBRATORY, SELF-PROPELLED, DOUBLE DRUM, SMOOTH, 13.2 TON, 84" WIDE, 2X1, ASPHALT COMPACTOR	EP	Average	CA CATERPILLAR INC. (MACHINE DIVISION)	831	18,907	52,455	71,361
					34.50	*92.07*	*126.58*
MAP T15CA014 TRACTOR, CRAWLER (DOZER), 240 HP, LOW GROUND PRESSURE, W/7.70 CY STRAIGHT BLADE (ADD ATTACHMENTS)	EP	Average	CA CATERPILLAR INC. (MACHINE DIVISION)	1,296	44,706	119,307	164,013
					1.77	*10.41*	*12.17*
MAP T50XX001 TRUCK, HIGHWAY, CONVENTIONAL, 1/2 TON PICKUP, 4X2	EP	Average	XX NO SPECIFIC MANUFACTURER	7,181	12,700	74,718	87,419
					2.53	*11.05*	*13.58*
MAP T50XX005 TRUCK, HIGHWAY, CONVENTIONAL, 3/4 TON PICKUP, 4X4	EP	Average	XX NO SPECIFIC MANUFACTURER	14,362	36,360	158,654	195,013
					65.23	*441.78*	*507.01*
USR XX0XX610 WORK TUG, 1000 HP 0	Non-EP	Average	ZZ GENERIC EQUIPMENT	2,765	180,337	1,221,436	1,401,773
					37.57	*0.00*	*37.57*
USR XX0XX610 WORK TUG, 1000 HP 0	Non-EP	Standby	ZZ GENERIC EQUIPMENT	2,285	85,846	0	85,846
					127.27	*808.46*	*935.73*
USR XX0XX630 TOWING VESSEL TUG, 3000 HP 0	Non-EP	Average	ZZ GENERIC EQUIPMENT	883	112,365	713,755	826,120
					41.67	*70.58*	*112.25*
USR XX0XX800 DUMP SCOW BARGE, 1,500 CY APPROX. 200'x 50' x 15'	Non-EP	Average	ZZ GENERIC EQUIPMENT	10,395	433,128	733,653	1,166,781
					27.20	*60.80*	*88.00*
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)	Non-EP	Average	ZZ GENERIC EQUIPMENT	4,040	109,869	245,626	355,496
Utility Subcontractor				**3,897**	**151,134**	**783,627**	**934,762**
					62.19	*139.65*	*201.83*
EP H25CA030 HYDRAULIC EXCAVATOR, CRAWLER, 175,500 LBS, 5.00 CY BUCKET, 34.75' MAX DIGGING DEPTH	EP	Average	CA CATERPILLAR INC. (MACHINE DIVISION)	239	14,852	33,353	48,205
					5.16	*72.41*	*77.57*

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Description	CostType	ConditionType	Manufacturer	EQHours	Ownership	Operating	Total
EP M10SM004 MARINE EQUIPMENT, BOATS & LAUNCHES, 23' LITTLE GIANT, W/CABIN TRI-HULL, CAP 3,400 LBS, OUTBOARD, 23.4' X 8.5' X 1.2'	EP	Average	SM SEAARK MARINE	915	4,717	66,224	70,941
					7.08	*8.01*	*15.09*
MAP T10CA023 TRACTOR ATTACHMENTS, POWER WINCH, W/CABLE, FOR D9 (ADD D9 TRACTOR)	EP	Average	CA CATERPILLAR INC. (MACHINE DIVISION)	915	6,479	7,325	13,803
					55.41	*313.32*	*368.73*
USR XX0XX600 WORK TUG, UNDER 500 HP 0	Non-EP	Average	ZZ GENERIC EQUIPMENT	239	13,233	74,833	88,066
					127.27	*808.46*	*935.73*
USR XX0XX630 TOWING VESSEL TUG, 3000 HP 0	Non-EP	Average	ZZ GENERIC EQUIPMENT	676	86,001	546,288	632,289
					28.27	*60.80*	*89.07*
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)	Non-EP	Average	ZZ GENERIC EQUIPMENT	915	25,852	55,605	81,457
Harbor Subcontractor				**10,968**	**185,772**	**422,297**	**608,068**
					45.94	*66.57*	*112.51*
EP C85LB013 CRANES, MECHANICAL, LATTICE BOOM, CRAWLER, 80 TON, 190' BOOM, LIFTING	EP	Average	LB LINK-BELT CONSTRUCTION EQUIPMENT CO.	508	23,336	33,815	57,151
					7.41	*46.53*	*53.95*
GEN A15Z0160 AIR COMPRESSOR, 600 CFM (17 CMM), 100 PSI (689 KPA) (ADD HOSE)	EP	Average	ZZ GENERIC EQUIPMENT	508	3,766	23,637	27,403
					1.51	*2.97*	*4.48*
GEN A20Z0490 AIR HOSE, 3.0" (76 MM) DIA x 100' (31 M) LENGTH, HARDROCK (USE AS DRILLING ACCESSORY)	EP	Average	ZZ GENERIC EQUIPMENT	1,016	1,531	3,021	4,551
					50.07	*105.32*	*155.39*
GEN C80Z2310 CRANE, HYDRAULIC, TRUCK MOUNTED, 90 TON (81.6 MT), 114' (34.7 M) BOOM, 8X4	EP	Average	ZZ GENERIC EQUIPMENT	57	2,861	6,018	8,879
					0.36	*3.18*	*3.53*
GEN G10Z3063 GENERATOR SET, PORTABLE, 5.5 KW, 120/240V, 60HZ	EP	Average	ZZ GENERIC EQUIPMENT	779	279	2,473	2,752
					2.22	*3.17*	*5.39*
GEN P10Z4840 PILE HAMMER ACCESSORIES, PILE LEADS, SWING 26" (660 MM) x 8" (660 MM), 86' (26.2 M) LENGTH	EP	Average	ZZ GENERIC EQUIPMENT	508	1,128	1,608	2,736

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Description	CostType	ConditionType	Manufacturer	EQHours	Ownership	Operating	Total
					1.78	*9.74*	*11.52*
GEN W35Z8640 WELDER, ENGINE DRIVEN, DIESEL, 300 AMP, TRAILER MOUNTED	EP	Average	ZZ GENERIC EQUIPMENT	229	407	2,227	2,634
					6.47	*2.36*	*8.83*
GEN XMEZ8805 BUTT FUSION MACHINE UP TO 20" (500 MM) PIPE, ADD 6KW 240 V GENERATOR	Non-EP	Average	ZZ GENERIC EQUIPMENT	779	5,035	1,837	6,872
					8.91	*29.16*	*38.07*
MAP C75GV021 CRANES, HYDRAULIC, SELF-PROPELLED, YARD, 10 TON, 30' BOOM, 4X4, NON-ROTATING OPERATOR'S CAB	EP	Average	GV GROVE CRANES	584	5,200	17,029	22,230
					21.91	*52.34*	*74.26*
MAP C80TE005 CRANES, HYDRAULIC, TRUCK MTD, ALL TERRAIN, 20 TON, 94' BOOM, 6X4X2	EP	Average	TE TEREX CORPORATION	4,478	98,113	234,381	332,494
					10.97	*18.23*	*29.20*
MAP P25VU002 PILE HAMMER, SINGLE ACTING, PNUEMATIC (STEAM/AIR), 18,000 FT-LBS (ADD 750 CFM COMPRESSOR, LEADS & CRANE)	EP	Average	VU VULCAN FOUNDATION EQUIPMENT, INC	508	5,572	9,262	14,834
					40.56	*0.00*	*40.56*
USR XX0XX610 WORK TUG, 1000 HP 0	Non-EP	Standby	ZZ GENERIC EQUIPMENT	381	15,452	0	15,452
					68.77	*441.78*	*510.55*
USR XX0XX610 WORK TUG, 1000 HP 0	Non-EP	Average	ZZ GENERIC EQUIPMENT	127	8,733	56,103	64,836
					28.27	*60.80*	*89.07*
USR XX0Z9760 DREDGE BARGE, 100-400 TON (90.7-362.9 MT)	Non-EP	Average	ZZ GENERIC EQUIPMENT	508	14,359	30,885	45,244
Surveyor Subcontractor				**91**	**285**	**3,338**	**3,624**
					5.16	*72.41*	*77.57*
EP M10SM004 MARINE EQUIPMENT, BOATS & LAUNCHES, 23' LITTLE GIANT, W/CABIN TRI-HULL, CAP 3,400 LBS, OUTBOARD, 23.4' X 8.5' X 1.2'	EP	Average	SM SEAARK MARINE	46	236	3,310	3,546
					1.09	*0.61*	*1.70*
GEN XMEZ8815 LASER LEVEL FOR PIPES	Non-EP	Average	ZZ GENERIC EQUIPMENT	46	50	28	78

Labor ID: LNS2009 EQ ID: EP07R09 Currency in US dollars TRACES MII Version 4.0

APPENDIX F
Cost and Schedule Risk Analysis

Cost Risk Summary

Project Base Cost	**46 M**
Contingency for Base Cost	**9 M**
Contingency Percentage	**20.0%**
Total Project Base Cost (80% confidence)	**56 M**

Confidence Level	Simulated Cost	Contingency (dollars)	Contingency %
0%	**41,540,770**	(4,692,230)	-10.1%
10%	**47,559,268**	1,326,268	2.9%
20%	**48,959,528**	2,726,528	5.9%
30%	**49,869,805**	3,636,805	7.9%
40%	**50,736,295**	4,503,295	9.7%
50%	**51,656,678**	5,423,678	11.7%
60%	**52,723,556**	6,490,556	14.0%
70%	**53,943,436**	7,710,436	16.7%
80%	**55,520,362**	**9,287,362**	**20.1%**
90%	**57,764,493**	11,531,493	24.9%
100%	**68,047,146**	21,814,146	47.2%

Schedule Risk Summary

Current Schedule	**47.8 months**
Contingency for Schedule Duration	**9.3 months**
Contingency Percentage	**19.4%**
Schedule Duration (80% confidence)	**57.1 months**

Confidence Level	Simulated Schedule	Contingency (months)	Contingency %
0%	47.84	0.00	0.0%
10%	49.11	1.28	2.7%
20%	50.39	2.55	5.3%
30%	51.43	3.59	7.5%
40%	52.45	4.61	9.6%
50%	53.48	5.64	11.8%
60%	54.54	6.70	14.0%
70%	55.72	7.89	16.5%
80%	**57.10**	**9.27**	**19.4%**
90%	59.10	11.26	23.5%
100%	69.40	21.56	45.1%

Risk Register Meeting

Date(s) of Risk Register Meeting

Tuesday, August 24, 2010

Risk Register Attendees

Lead	Name	Office	Representing
☑	Callan, Kim	CENWW, HQ Cost COP, Civil	Cost Engineering
☐	Ken Eisses	CEPOA-EN-CW-HH	Hydrology/Hydraulic Design
☐	Karl Harvey	CEPOA-EN-CE	Cost Engineering
☐	Joe Locke		Construction
☐	Fore, Anne	CEPOA, Cost Tech Spec	Cost Engineering
☐	Bruce Sexauer	CEPOA-EN-CW-PF	Planning
☐	Al Arruda	CEPOA-EN-CE	Cost Engineering

Risk Register

Risk ID	Description	Concern	Discussion	Likelihood	COST		SCHEDULE		Variance Distribution	Responsibility/ POC	Affected Components
					Impact	Risk Level	Impact	Risk Level			
Construction											
CON-01	Restricted Work Windows	Changing of Environmental windows to project	Very little possibility of changing environmental requirements	Unlikely	Signficant	**Moderate**	Signficant	**Moderate**	N/A -Not Modeled	Environmental Compliance	N/A - Not Modeled
CON-02	Staging Area of construction	Limted existing area for construction. Staging area for stockpiling of rock.	Limited staging areas	Likely	Critical	**High**	Critical	**High**	Yes-No	Engineering	Contract Cost & Schedule
CON-05	Fuel Prices Fluctuate Signifcantly	covered under cost	covered under cost						N/A -Not Modeled	N/A	N/A - Not Modeled
CON-06	Weather Impacts	The project schedule considers the productivity reductions due to difficult winters, wet springs, and hot-humid late summers. Risk remains that unexpectedly harsh weather conditions could cause additional schedule impacts.	Unlikley to cause variance above current contract weather delays.	Unlikely	Signficant	**Moderate**	Signficant	**Moderate**	N/A -Not Modeled	N/A	N/A - Not Modeled
CON-09	Overbuild and Loss Factors	Construction of the breakwaters involves large quantities of rock; to account for loss (rock placed outside the design template) and overbuild the neatline quantities were increased as follows: Armor Rock 10%, Secondary Rock 15%, Core Rock 20%	Armor stone has risk, 2nd rock very little, core rock	Unlikely	Marginal	**Low**	Marginal	**Low**	N/A -Not Modeled	Engineering	N/A - Not Modeled
Contract Acquisition											
CA-08	Contract Modifications	Based on the work involved and the inherent possibility of differing site conditions, a high potential for claims and modification work.	One contract. Very unlikely of multiple contracts	Very Unlikely	Signficant	**Low**	Signficant	**Low**	N/A -Not Modeled	Contracting	N/A - Not Modeled
Cost and Schedule											
ES-01	Clamshell Dredging	Some dredging for the channel entrance and basin is required totaling 192,000 BCMs. Risk involves the adjustment for overdepth, which was estimated at 3.0%. The overall estimated cost for dredging only (not including disposal) was $11.53/BCM. Risk involves this low percentage for over-excavation considering the items listed in Item #4; and can the clamshell dredge excavate all this material without any need for drilling and blasting; and were the quotes to perform this work provided by contractors realistic (CEDEP was not used).	Barge availability, competition	Very Likely	Signficant	**High**	Signficant	**High**	Triangular	Cost Engineering	Contract Cost & Schedule
ES-02	Rock Prices	The price of delivered rock (for the 3 types) could change between when the quote was obtained and the work performed.	There are many quarries near tidewater in Southeast; we, of course, require testing prior to the acceptance. Wrangell has one at the airport that we used for the Wrangell SBH, Haines has two Schnabel and Turner - the Schnabel rock is what is in the breakwater, and two near Juneau called Fish Creek Quarry and Stablers Point - I believe one of those was used in the Douglas SBH project. There is a new quarry under development on Kodiak	Very Likely	Signficant	**High**	Signficant	**High**	Triangular	Cost Engineering	Contract Cost

Risk Register

					COST		SCHEDULE				
Risk ID	**Description**	**Concern**	**Discussion**	**Likelihood**	**Impact**	**Risk Level**	**Impact**	**Risk Level**	**Variance Distribution**	**Responsibility/ POC**	**Affected Components**
ES-03	Disposal of Dredged material	The amount of material barged to disposal was swelled by 20% to 230,400 LCMs. Risk involves the estimated allowance for swell for the underwater excavation, in that while there will be some loss, this factor may be low.		Unlikely	Marginal	**Low**	Marginal	**Low**	N/A -Not Modeled	Cost Engineering	N/A - Not Modeled
ES-04	Fuel Prices	The price of diesel fuel could change between when the quote was obtained and the work performed.	Work involves heavy equipment dependant on fuel (Crane, Clamshell, Marine)	Likely	Signficant	**High**	Negligible	**Low**	Triangular	Cost Engineering	Contract Cost
ES-05	Hydro-surveys	The time estimated to perform surveys at the harbor and in-water disposal site is based on 1 before and 1 after survey or 2 total per site. Risk involves if this surveying and mapping can be performed for the quoted amount and in the number passes used.	Potential for additional surveys	Likely	Marginal	**Moderate**	Marginal	**Moderate**	Triangular	Cost Engineering	Contract Cost
ES-06	Harbor Floats and Facilities	The price of materials used to construct the new marina facility involves about $8M in direct cost, these prices could change between when the quotes were obtained and the work performed.	Check on est.	Very Unlikely	Negligible	**Low**	Negligible	**Low**	N/A -Not Modeled	Cost Engineering	N/A - Not Modeled
ES-07	Mob, Demob & Prepwork	Mob, Demob & Prepwork - The total cost estimated for this work is about $2M, assumptions were based on the prime contractor coming from Seattle and the Barge Crane from Anchorage. Potential risk for limited contractor availability during the contract period, distance to mob could change, and limited number of tugs & barges.	High potential for additonal construction seasons	Very Likely	Critical	**High**	Marginal	**Moderate**	Yes-No	Contracting	Contract Cost
ES-08	Schedule to Perform	Schedule to Perform – The estimated contract time to perform the NED plan is 29 months. Potential risk for increasing the number of mobs and demobs based any seasonal work involved in performing this marine work over the contract period. This event is modeled in several other risk events.		Very Unlikely	Negligible	**Low**	Negligible	**Low**	Yes-No	Cost Engineering	Contract Schedule
ES-09	Relocation of Fiber Optic Cable	Relocation of the cable requires some underwater diving and specialized equipment. Potential risk involves this underwater work, in that, the diving crew and support equipment may not be adequate and time to perform underestimated. Note that the productivity factor for this work was 70%, the same as the other work.	Schedule Factor, cost low, performed by 3rd party contract	Likely	Negligible	**Low**	Signficant	**High**	Uniform	Cost Engineering	N/A - Not Modeled
ES-28	Estimate Productivity Factor	Based on the work to be performed an overall reduction in MII productivity was made by using a 70% productivity factor. The productivity in Alaska and this job in particular may be even less.	70% reduction appears to be excessive for this type of construction, howeverestiate was developed by A/E based on market analysis from contractors. Pricing could be on low side.	Likely	Signficant	**High**	Marginal	**Moderate**	Min Extreme	Cost Engineering	Contract Cost
External											
EX-04	Market conditions and bidding competition	Alaska Site, limited contractors fro states willing to bid.	Dependant on contract aquistiion, and availablity of contractors	Likely	Critical	**High**	Negligible	**Low**	N/A -Not Modeled	Contracting	N/A - Not Modeled

Risk Register

Risk ID	Description	Concern	Discussion	Likelihood	COST		SCHEDULE		Variance Distribution	Responsibility/ POC	Affected Components
					Impact	Risk Level	Impact	Risk Level			
Lands & Damages											
LD-01	Current Real Estate Costs	Real Estate Costs – Notes indicate that this estimate is based on Aug 1997 dollars ($221,5000). They were indexed using CWCCIS to March 2010 ($334,800). Potential for these costs to change.	Real Estate has recently reviewed data and compared to current market conditions, resulting in no additional changes.	Unlikely	Marginal	Low	Marginal	Low	N/A -Not Modeled	Real Estate	N/A - Not Modeled
Programmatic											
PR-01	Escalation Exceeds CWCCIS factors	Does the area show great escalation changes above national trends	Alsaka District currently does not reflect large variance potential	Unlikely	Marginal	Low	Marginal	Low	N/A -Not Modeled	Cost Engineering	N/A - Not Modeled
PR-02	Intermittent Funding	Receiving inadequate or excess funds will result in inefficient design effort and contract procurements. The overall implementation of the project could easily be affected, exposing the project to a greater risk of experiencing inflation in excess of the OMB published rates. Local $ less risky	This is one of the most difficult risk to quantify and yet has perhaps the greatest potential to affect the project's final cost and schedule requirements. Additionally, the PDT has little or no influence over this risk item.	Likely	Signficant	High	Critical	High	Triangular	Project Manager	Project Cost & Schedule
Project & Program Management											
PM-01	PED Funding - E&D Cost Will Vary Significantly from Estimate	The allowance for PED in the TPC was estimated at slightly over 2.0%. The risk involves such a low percent based on a fairly complicated and log duration contract.	Some major design elements have been completed	Very Unlikely	Marginal	Low	Marginal	Low	N/A -Not Modeled	Engineering	N/A - Not Modeled
PM-02	Project Schedule for NED Plan	The current schedule for the NED plan may not be realistic and additional time may be required.	Potential for additional year of construction	Very Likely	Signficant	High	Signficant	High	Student's t	Engineering	Project Cost & Schedule
PM-03	CM Funding - - CM Cost Will Vary Significantly from Estimate	The allowance for CM in the TPC was estimated at slightly over 3.0%. The risk involves such a low percent based on a fairly complicated and log duration contract.	Research	Certain	Critical	High	Negligible	Low	Normal	Construction	Contract Cost
PM-04	Implementation of VE Recommendations	A VE suggestion will only be incorporated with the intent to reduce costs and/or schedule.	At least one and probably several VE studies will be performed on this project. Standard designs.	Unlikely	Negligible	Low	Negligible	Low	N/A -Not Modeled	Project Manager	N/A - Not Modeled
Technical Design											
TD-04	Rock Quantities	Underwater surveys may not adequately portray the actual work; there is a risk that the estimated embankment quantity calculations may not accurately reflect the payment quantities.	Qty's are mid 90's data, engineering to resurvey before final contract. Anticipated little or no change based on historic means	Unlikely	Marginal	Low	Marginal	Low	N/A -Not Modeled	Engineering	N/A - Not Modeled
TD-05	Dredging Quantities	Underwater surveys may not adequately portray the actual work; there is a risk that the estimated dredging quantity calculations may not accurately reflect the payment quantities.	Qty's are mid 90's data, engineering to resurvey before final contract. Anticipated little or no change based on historic means	Unlikely	Marginal	Low	Marginal	Low	N/A -Not Modeled	Engineering	N/A - Not Modeled

Details of Event: ***CON-02***

Details on Modeled Risk Events

Staging Area of construction

Risk Identification

Risk Type *Construction*

Responsibility/POC *Engineering*

Affected Component *Contract Cost & Schedule*

Distribution *Yes-No*

Concern *Limted existing area for construction. Staging area for stockpiling of rock.*

Discussion *Limited staging areas*

Risk Analysis

Considering the likelihood...

Likelihood *Likely*

And impact to...

Cost *Critical*

Schedule *Critical*

The corresponding risks would be...

Cost **High**

Schedule **High**

Likelihood of Occurrence	Risk Level				
Very Likely	Low	Moderate	High	High	High
Likely	Low	Moderate	High	High	High
Unlikely	Low	Low	Moderate	Moderate	High
Very Unlikely	Low	Low	Low	Low	High
	Negligible	Marginal	Significant	Critical	Crisis

Impact or Consequences of Occurrence

Possible sources that could trigger this event include:

30

Correlation

Details of Event: ***CON-02***

Details on Modeled Risk Events

Staging Area of construction

Effect on Estimate

Concern over available area for material staging area. Existing estimates reflect stockpile of material for final placement. Lack of staging area could cause slowdown of stone placement.

Affected Components **$11,726,645**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Breakwater cost	1.00	LS	$11,726,644.57	$11,726,645	0.00%	0.00%	**$11,726,645**

Best Case **$11,726,645**

Staging are is available, no change to cost.

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Breakwater cost	1.00	LS	$11,726,644.57	$11,726,645	0.00%	0.00%	**$11,726,645**

Most Likely **$11,726,645**

Staging are is available, no change to cost.

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Breakwater cost	1.00	LS	$11,726,644.57	$11,726,645	0.00%	0.00%	**$11,726,645**

Worst Case **$12,900,000**

lack of staging area relects slowdown of placement. Placement equates to approx 50% of cost. Therefore add 20% to cost.
$11,726,644.57 x .5 x .2 = $12,900,000

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Breakwater cost	1.00	LS	$12,900,000.00	$12,900,000	0.00%	0.00%	**$12,900,000**

	Best Case	Most Likely	Worst Case
Cost Impacts	**$0**	**$0**	**$1,173,355**

Details of Event: ***CON-02***

Details on Modeled Risk Events

Staging Area of construction

Effect on Schedule

	Best Case	Most Likely	Worst Case

Schedule Impacts

Details of Event: ***ES-01***

Details on Modeled Risk Events

Clamshell Dredging

Risk Identification

Risk Type	*Cost and Schedule*
Responsibility/POC	*Cost Engineering*
Affected Component	*Contract Cost & Schedule*
Distribution	*Triangular*
Concern	*Some dredging for the channel entrance and basin is required totaling 192,000 BCMs. Risk involves the adjustment for overdepth, which was estimated at 3.0%. The overall estimated cost for dredging only (not including disposal) was $11.53/BCM. Risk involves this low percentage for over-excavation considering the items listed in Item #4; and can the clamshell dredge excavate all this material without any need for drilling and blasting; and were the quotes to perform this work provided by contractors realistic (CEDEP was not used).*
Discussion	*Barge availability, competition*

Risk Analysis

Considering the likelihood...

Likelihood *Very Likely*

And impact to...

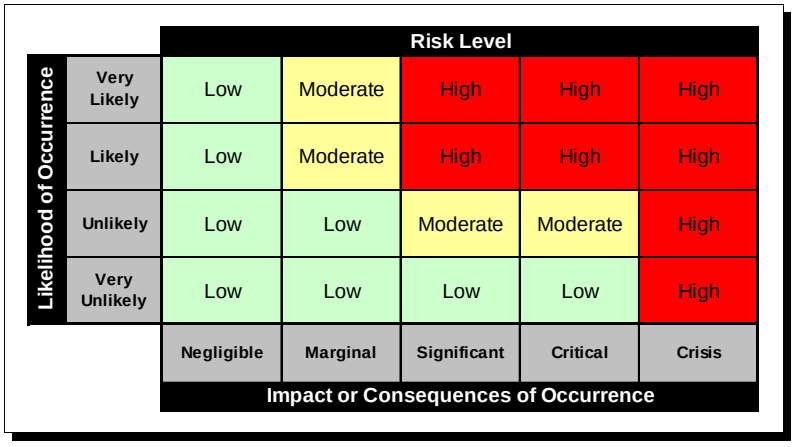
Cost *Signficant*

Schedule *Signficant*

The corresponding risks would be...

Cost **High**

Schedule **High**



Correlation

Details of Event: ***ES-01***

Details on Modeled Risk Events

Clamshell Dredging

Effect on Estimate

Dredging of approx 190,000 CM. With various disposal options, inWater, Upland

Affected Components **$5,140,459**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Clamshell Dredging	1.00	LS	$5,140,459.24	$5,140,459	0.00%	0.00%	**$5,140,459**

Best Case **$4,626,413**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Dredging	1.00	LS	$4,626,413.32	$4,626,413	0.00%	0.00%	**$4,626,413**

Most Likely **$5,911,528**

Increase dredge cost by 15% due to unknown compitition in the area.

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Dredging	1.00	LS	$5,911,528.13	$5,911,528	0.00%	0.00%	**$5,911,528**

Worst Case **$5,911,528**

Increase dredge cost by 15% due to unknown compitition in the area.

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Dredging	1.00	LS	$5,911,528.13	$5,911,528	0.00%	0.00%	**$5,911,528**

	Best Case	Most Likely	Worst Case
Cost Impacts	**($514,046)**	**$771,069**	**$771,069**

Details of Event: ***ES-01***

Details on Modeled Risk Events

Clamshell Dredging

Effect on Schedule

	Best Case	Most Likely	Worst Case
Schedule Impacts			

Details of Event: ***ES-02***

Details on Modeled Risk Events

Rock Prices

Risk Identification

Risk Type	*Cost and Schedule*
Responsibility/POC	*Cost Engineering*
Affected Component	*Contract Cost*
Distribution	*Triangular*
Concern	*The price of delivered rock (for the 3 types) could change between when the quote was obtained and the work performed.*
Discussion	*There are many quarries near tidewater in Southeast; we, of course, require testing prior to the acceptance. Wrangell has one at the airport that we used for the Wrangell SBH, Haines has two Schnabel and Turner - the Schnabel rock is what is in the breakwater, and two near Juneau called Fish Creek Quarry and Stablers Point - I believe one of those was used in the Douglas SBH project. There is a new quarry under development on Kodiak*

Risk Analysis

Considering the likelihood...

Likelihood	*Very Likely*

And impact to...

Cost	*Signficant*
Schedule	*Signficant*

The corresponding risks would be...

Cost	**High**
Schedule	**High**

Likelihood of Occurrence \ Risk Level	Negligible	Marginal	Significant	Critical	Crisis
Very Likely	Low	Moderate	High	High	High
Likely	Low	Moderate	High	High	High
Unlikely	Low	Low	Moderate	Moderate	High
Very Unlikely	Low	Low	Low	Low	High

Impact or Consequences of Occurrence

Possible sources that could trigger this event include:

18

Possible sources that could trigger this event include:

30

Correlation

Details of Event: ***ES-02***

Details on Modeled Risk Events

Rock Prices

Effect on Estimate

Affected Components							**$3,294,020**
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Rock Material Pricing	0.00		$0.00	$0	0.00%	0.00%	**$0**
Armor Stone	34,323.00	CM	$65.00	$2,230,995	0.00%	0.00%	**$2,230,995**
Secondary Rock	20,310.00	CM	$52.34	$1,063,025	0.00%	0.00%	**$1,063,025**

Best Case							**$3,294,020**
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Rock Material Pricing	0.00		$0.00	$0	0.00%	0.00%	**$0**
Armor Stone	34,323.00	CM	$65.00	$2,230,995	0.00%	0.00%	**$2,230,995**
Secondary Rock	20,310.00	CM	$52.34	$1,063,025	0.00%	0.00%	**$1,063,025**

Most Likely							**$3,294,020**
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Rock Material Pricing	0.00		$0.00	$0	0.00%	0.00%	**$0**
Armor Stone	34,323.00	CM	$65.00	$2,230,995	0.00%	0.00%	**$2,230,995**
Secondary Rock	20,310.00	CM	$52.34	$1,063,025	0.00%	0.00%	**$1,063,025**

Worst Case							**$4,209,215**
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Rock Material Pricing	0.00		$0.00	$0	0.00%	0.00%	**$0**
Armor Stone	34,323.00	CM	$80.00	$2,745,840	1.00%	0.00%	**$2,773,298**
Secondary Rock	20,310.00	CM	$70.00	$1,421,700	1.00%	0.00%	**$1,435,917**

	Best Case	**Most Likely**	**Worst Case**
Cost Impacts	**$0**	**$0**	**$915,195**

Details of Event: ***ES-02***

Details on Modeled Risk Events

Rock Prices

Effect on Schedule

	Best Case	Most Likely	Worst Case

Schedule Impacts

Details of Event: ***ES-04***

Details on Modeled Risk Events

Fuel Prices

Risk Identification

Risk Type	*Cost and Schedule*
Responsibility/POC	*Cost Engineering*
Affected Component	*Contract Cost*
Distribution	*Triangular*
Concern	*The price of diesel fuel could change between when the quote was obtained and the work performed.*
Discussion	*Work involves heavy equipment dependant on fuel (Crane, Clamshell, Marine)*

Risk Analysis

Considering the likelihood...

Likelihood *Likely*

And impact to...

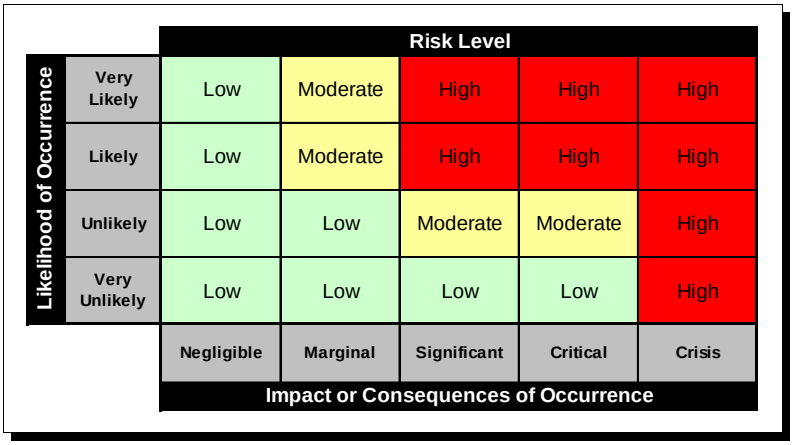
Cost *Signficant*

Schedule *Negligible*

The corresponding risks would be...

Cost **High**

Schedule **Low**



Possible sources that could trigger this event include:

15

Correlation

Details of Event: ***ES-04***

Details on Modeled Risk Events

Fuel Prices

Effect on Estimate

Affected Components							$0
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Fuel	1.00	LS	$0.00	$0	0.00%	0.00%	**$0**
Best Case							**$0**
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Fuel Adjustments	0.00		$0.00	$0	0.00%	0.00%	**$0**
Most Likely							**$0**
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Fuel Adjustments	0.00		$0.00	$0	0.00%	0.00%	**$0**
Worst Case							**$250,000**
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Fuel Adjustments	1.00	LS	$250,000.00	$250,000	0.00%	0.00%	**$250,000**

	Best Case	Most Likely	Worst Case
Cost Impacts	**$0**	**$0**	**$250,000**

Details of Event: ***ES-04***

Details on Modeled Risk Events

Fuel Prices

Effect on Schedule

	Best Case	Most Likely	Worst Case

Schedule Impacts

Details of Event: ***ES-07***

Details on Modeled Risk Events

Mob, Demob & Prepwork

Risk Identification

Risk Type	*Cost and Schedule*
Responsibility/POC	*Contracting*
Affected Component	*Contract Cost*
Distribution	*Yes-No*
Concern	*Mob, Demob & Prepwork - The total cost estimated for this work is about $2M, assumptions were based on the prime contractor coming from Seattle and the Barge Crane from Anchorage. Potential risk for limited contractor availability during the contract period, distance to mob could change, and limited number of tugs & barges.*
Discussion	*High potential for additonal construction seasons*

Risk Analysis

Considering the likelihood...

Likelihood *Very Likely*

And impact to...

Cost *Critical*

Schedule *Marginal*

The corresponding risks would be...

Cost **High**

Schedule **Moderate**

Likelihood of Occurrence \ Risk Level	Negligible	Marginal	Significant	Critical	Crisis
Very Likely	Low	Moderate	High	High	High
Likely	Low	Moderate	High	High	High
Unlikely	Low	Low	Moderate	Moderate	High
Very Unlikely	Low	Low	Low	Low	High

Impact or Consequences of Occurrence

Correlation

Details of Event: ***ES-07***

Details on Modeled Risk Events

Mob, Demob & Prepwork

Effect on Estimate

Additonal season, plus 1 mob/demob per season. Assume next job will pick up demob. On 2nd and third seasons. Or allow for additional layup cost, Assume 50% of equipment would be required.

Affected Components **$1,979,749**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Mob & Demob	1.00	LS	$1,979,749.08	$1,979,749	0.00%	0.00%	**$1,979,749**

Best Case **$1,979,749**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Mob & Demob	1.00	LS	$1,979,749.08	$1,979,749	0.00%	0.00%	**$1,979,749**

Most Likely **$1,979,749**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Mob and Demob	1.00	LS	$1,979,749.08	$1,979,749	0.00%	0.00%	**$1,979,749**

Worst Case **$2,979,749**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Mob & Demob	1.00	LS	$1,979,749.08	$1,979,749	0.00%	0.00%	**$1,979,749**
Mob 2nd Season	1.00	LS	$500,000.00	$500,000	0.00%	0.00%	**$500,000**
Mob 3rd Season	1.00	LS	$500,000.00	$500,000	0.00%	0.00%	**$500,000**

	Best Case	Most Likely	Worst Case
Cost Impacts	**$0**	**$0**	**$1,000,000**

Details of Event: ***ES-07***

Details on Modeled Risk Events

Mob, Demob & Prepwork

Effect on Schedule

	Best Case	Most Likely	Worst Case
Schedule Impacts			

Details of Event: ***ES-09***

Details on Modeled Risk Events

Relocation of Fiber Optic Cable

Risk Identification

Risk Type	*Cost and Schedule*
Responsibility/POC	*Cost Engineering*
Affected Component	*N/A - Not Modeled*
Distribution	*Uniform*
Concern	*Relocation of the cable requires some underwater diving and specialized equipment. Potential risk involves this underwater work, in that, the diving crew and support equipment may not be adequate and time to perform underestimated. Note that the productivity factor for this work was 70%, the same as the other work.*
Discussion	*Schedule Factor, cost low, performed by 3rd party contract*

Risk Analysis

Considering the likelihood...

Likelihood *Likely*

And impact to...

Cost *Negligible*

Schedule *Signficant*

The corresponding risks would be...

Cost **Low**

Schedule **High**

Likelihood of Occurrence	Risk Level				
Very Likely	Low	Moderate	High	High	High
Likely	Low	Moderate	High	High	High
Unlikely	Low	Low	Moderate	Moderate	High
Very Unlikely	Low	Low	Low	Low	High
	Negligible	Marginal	Significant	Critical	Crisis

Impact or Consequences of Occurrence

Possible sources that could trigger this event include:

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Correlation

Details of Event: ***ES-09***

Details on Modeled Risk Events

Relocation of Fiber Optic Cable

Effect on Estimate

	Best Case	Most Likely	Worst Case
Cost Impacts			

Details of Event: ***ES-09***

Details on Modeled Risk Events

Relocation of Fiber Optic Cable

Effect on Schedule

Fiber Optic cable is being relocated by private firm. The project excution schedule is based on timely relocation of cable

Best Case **0.00 Months**

as scheduled

Most Likely **0.00 Months**

as schedule

Worst Case **6.00 Months**

delay of 6 months

	Best Case	Most Likely	Worst Case
Schedule Impacts	**0.00**	**0.00**	**6.00**

Details of Event: ***ES-28***

Details on Modeled Risk Events

Estimate Productivity Factor

Risk Identification

Risk Type	*Cost and Schedule*
Responsibility/POC	*Cost Engineering*
Affected Component	*Contract Cost*
Distribution	*Min Extreme*
Concern	*Based on the work to be performed an overall reduction in MII productivity was made by using a 70% productivity factor. The productivity in Alaska and this job in particular may be even less.*
Discussion	*70% reduction appears to be excessive for this type of construction, howeverestiate was developed by A/E based on market analysis from contractors. Pricing could be on low side.*

Risk Analysis

Considering the likelihood...

Likelihood *Likely*

And impact to...

Cost *Signficant*

Schedule *Marginal*

The corresponding risks would be...

Cost **High**

Schedule **Moderate**

Likelihood of Occurrence	Negligible	Marginal	Significant	Critical	Crisis
Very Likely	Low	Moderate	High	High	High
Likely	Low	Moderate	High	High	High
Unlikely	Low	Low	Moderate	Moderate	High
Very Unlikely	Low	Low	Low	Low	High

Risk Level

Impact or Consequences of Occurrence

Correlation

Details of Event: ***ES-28***

Details on Modeled Risk Events

Estimate Productivity Factor

Effect on Estimate

The estimate assumes a bad worst case scenario. Actual produvity could be 100%

Affected Components **$46,571,743**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Cost Related to productivity	1.00	LS	$46,571,743.21	$46,571,743	0.00%	0.00%	**$46,571,743**

Best Case **$39,860,956**

Assumes 100% production

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Productivity	1.00	LS	$39,860,956.45	$39,860,956	0.00%	0.00%	**$39,860,956**

Most Likely **$46,571,743**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Cost related to Producivity	1.00	LS	$46,571,743.21	$46,571,743	0.00%	0.00%	**$46,571,743**

Worst Case **$46,571,743**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Cost related to Producivity	1.00	LS	$46,571,743.21	$46,571,743	0.00%	0.00%	**$46,571,743**

	Best Case	Most Likely	Worst Case
Cost Impacts	**($6,710,787)**	**$0**	**$0**

Details of Event: ***ES-28***

Details on Modeled Risk Events

Estimate Productivity Factor

Effect on Schedule

	Best Case	Most Likely	Worst Case

Schedule Impacts

Details of Event: ***EX-04***

Details on Modeled Risk Events

Market conditions and bidding competition

Risk Identification

Risk Type	*External*
Responsibility/POC	*Contracting*
Affected Component	*N/A - Not Modeled*
Distribution	*N/A -Not Modeled*
Concern	*Alaska Site, limited contractors fro states willing to bid.*
Discussion	*Dependant on contract aquistiion, and availablity of contractors*

Risk Analysis

Considering the likelihood...

Likelihood *Likely*

And impact to...

Cost *Critical*

Schedule *Negligible*

The corresponding risks would be...

Cost **High**

Schedule **Low**

Likelihood of Occurrence \ Risk Level	Negligible	Marginal	Significant	Critical	Crisis
Very Likely	Low	Moderate	High	High	High
Likely	Low	Moderate	High	High	High
Unlikely	Low	Low	Moderate	Moderate	High
Very Unlikely	Low	Low	Low	Low	High

Impact or Consequences of Occurrence

Correlation

Details of Event: ***EX-04***

Details on Modeled Risk Events

Market conditions and bidding competition

Effect on Estimate

Affected Components							$46,234,000
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Construction Cost	1.00	Job	$46,234,000.00	$46,234,000	0.00%	0.00%	**$46,234,000**

Best Case							$46,234,000
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Construction Cost	1.00	Job	$46,234,000.00	$46,234,000	0.00%	0.00%	**$46,234,000**

Most Likely							$46,234,000
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Construction Cost	1.00	Job	$46,234,000.00	$46,234,000	0.00%	0.00%	**$46,234,000**

Worst Case							$53,169,100
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Construction Cost	1.15	Job	$46,234,000.00	$53,169,100	0.00%	0.00%	**$53,169,100**

	Best Case	Most Likely	Worst Case
Cost Impacts	**$0**	**$0**	**$6,935,100**

Details of Event: ***EX-04***

Details on Modeled Risk Events

Market conditions and bidding competition

Effect on Schedule

	Best Case	Most Likely	Worst Case

Schedule Impacts

Details of Event: ***PM-02***

Details on Modeled Risk Events

Project Schedule for NED Plan

Risk Identification

Risk Type *Project & Program Management*

Responsibility/POC *Engineering*

Affected Component *Project Cost & Schedule*

Distribution *Student's t*

Concern *The current schedule for the NED plan may not be realistic and additional time may be required.*

Discussion *Potential for additional year of construction*

Risk Analysis

Considering the likelihood...

Likelihood *Very Likely*

And impact to...

Cost *Signficant*

Schedule *Signficant*

The corresponding risks would be...

Cost **High**

Schedule **High**

Likelihood of Occurrence	Negligible	Marginal	Significant	Critical	Crisis
Very Likely	Low	Moderate	High	High	High
Likely	Low	Moderate	High	High	High
Unlikely	Low	Low	Moderate	Moderate	High
Very Unlikely	Low	Low	Low	Low	High

Risk Level

Impact or Consequences of Occurrence

Possible sources that could trigger this event include:

30

Correlation

Details of Event: ***PM-02***

Details on Modeled Risk Events

Project Schedule for NED Plan

Effect on Estimate

Allow for additional season of hotel cost

Affected Components **$1,450,000**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Government (S&A)	29.00	mo	$50,000.00	$1,450,000	0.00%	0.00%	**$1,450,000**

Best Case **$1,450,000**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Government (S&A)	29.00	mo	$50,000.00	$1,450,000	0.00%	0.00%	**$1,450,000**

Most Likely **$1,450,000**

Complete in 29 months as scheduled

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Government (S&A)	29.00	mo	$50,000.00	$1,450,000	0.00%	0.00%	**$1,450,000**

Worst Case **$1,950,000**

Description:	Quantity	UOM	Unit Cost	Cost	E&D %	S&A %	Total Cost
Government (S&A)	39.00	mo	$50,000.00	$1,950,000	0.00%	0.00%	**$1,950,000**

	Best Case	Most Likely	Worst Case
Cost Impacts	**$0**	**$0**	**$500,000**

Details of Event: ***PM-02***

Details on Modeled Risk Events

Project Schedule for NED Plan

Effect on Schedule

Current schedule has 29 months in schedule

Best Case	**0.00**	**Months**

same as estimate

Most Likely	**0.00**	**Months**

same as estimate

Worst Case	**10.00**	**Months**

Discussions resulted in very high potential for additional season for contract

	Best Case	Most Likely	Worst Case
Schedule Impacts	**0.00**	**0.00**	**10.00**

Details of Event: ***PM-03***

Details on Modeled Risk Events

CM Funding - - CM Cost Will Vary Significantly from Estimate

Risk Identification

Risk Type	*Project & Program Management*
Responsibility/POC	*Construction*
Affected Component	*Contract Cost*
Distribution	*Normal*
Concern	*The allowance for CM in the TPC was estimated at slightly over 3.0%. The risk involves such a low percent based on a fairly complicated and log duration contract.*
Discussion	*Research*

Risk Analysis

Considering the likelihood...

Likelihood *Certain*

And impact to...

Cost *Critical*

Schedule *Negligible*

The corresponding risks would be...

Cost **High**

Schedule **Low**

Likelihood of Occurrence	Risk Level				
Very Likely	Low	Moderate	High	High	High
Likely	Low	Moderate	High	High	High
Unlikely	Low	Low	Moderate	Moderate	High
Very Unlikely	Low	Low	Low	Low	High
	Negligible	Marginal	Significant	Critical	Crisis

Impact or Consequences of Occurrence

Possible sources that could trigger this event include:

30

Correlation

ES-08	Schedule to Perform
ES-07	Mob, Demob & Prepwork

Details of Event: ***PM-03***

Details on Modeled Risk Events

CM Funding - - CM Cost Will Vary Significantly from Estimate

Effect on Estimate

Affected Components							$45,895,795
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
CM	1.00	LS	$43,499,000.00	$43,499,000	2.18%	3.33%	**$45,895,795**
Best Case							$45,895,795
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
CM	1.00	LS	$43,499,000.00	$43,499,000	2.18%	3.33%	**$45,895,795**
Most Likely							$45,895,795
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
CM	1.00	LS	$43,499,000.00	$43,499,000	2.18%	3.33%	**$45,895,795**
Worst Case							$47,927,198
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
CM	1.00	LS	$43,499,000.00	$43,499,000	2.18%	8.00%	**$47,927,198**

	Best Case	Most Likely	Worst Case
Cost Impacts	**$0**	**$0**	**$2,031,403**

Details of Event: ***PM-03***

Details on Modeled Risk Events

CM Funding - - CM Cost Will Vary Significantly from Estimate

Effect on Schedule

	Best Case	Most Likely	Worst Case

Schedule Impacts

Details of Event: ***PR-02***

Details on Modeled Risk Events

Intermittent Funding

Risk Identification

Risk Type	*Programmatic*
Responsibility/POC	*Project Manager*
Affected Component	*Project Cost & Schedule*
Distribution	*Triangular*
Concern	*Receiving inadequate or excess funds will result in inefficient design effort and contract procurements. The overall implementation of the project could easily be affected, exposing the project to a greater risk of experiencing inflation in excess of the OMB published rates. Local $ less risky*
Discussion	*This is one of the most difficult risk to quantify and yet has perhaps the greatest potential to affect the project's final cost and schedule requirements. Additionally, the PDT has little or no influence over this risk item.*

Risk Analysis

Considering the likelihood...

Likelihood *Likely*

And impact to...

Cost *Signficant*

Schedule *Critical*

The corresponding risks would be...

Cost **High**

Schedule **High**

Likelihood of Occurrence	Risk Level				
Very Likely	Low	Moderate	High	High	High
Likely	Low	Moderate	High	High	High
Unlikely	Low	Low	Moderate	Moderate	High
Very Unlikely	Low	Low	Low	Low	High
	Negligible	Marginal	Significant	Critical	Crisis

Impact or Consequences of Occurrence

Possible sources that could trigger this event include:

17

Correlation

Details of Event: ***PR-02***

Details on Modeled Risk Events

Intermittent Funding

Effect on Estimate

Affected Components							$0
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Scheduled	0.00	LS	$0.00	$0	0.00%	0.00%	**$0**

Best Case							$0
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
schedule	0.00	LS	$0.00	$0	0.00%	0.00%	**$0**

Most Likely							$0
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Schedule	0.00	LS	$0.00	$0	0.00%	0.00%	**$0**

Worst Case							$3,000,000
Description:	**Quantity**	**UOM**	**Unit Cost**	**Cost**	**E&D %**	**S&A %**	**Total Cost**
Esclation of additional year	0.30	%	$10,000,000.00	$3,000,000	0.00%	0.00%	**$3,000,000**

	Best Case	Most Likely	Worst Case
Cost Impacts	**$0**	**$0**	**$3,000,000**

Details of Event: ***PR-02***

Details on Modeled Risk Events

Intermittent Funding

Effect on Schedule

Lack of or partial funding as scheduled could a 1 season delay

Best Case	**0.00**	**Months**

as scheduled

Most Likely	**0.00**	**Months**

ass scheduled

Worst Case	**10.00**	**Months**

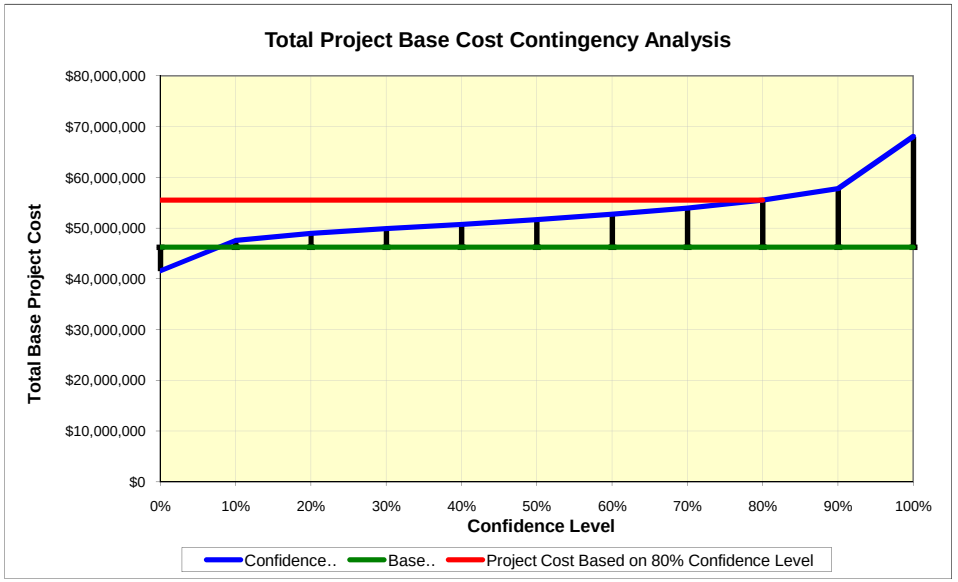
additional 10 mo season

	Best Case	Most Likely	Worst Case
Schedule Impacts	**0.00**	**0.00**	**10.00**

Cost Risk Analysis

Total Project Base Cost	**46,233,000**
Crystal Ball cost simulations	**46,233,000**
Total Project Cost @ 80% Confidence Level	**$55,520,362**
Contingency	**$9,287,362**
Contingency %	**20%**

Confidence Level	Simulated Cost	Contingency (dollars)	Contingency %
0%	**41,540,770**	(4,692,230)	-10.1%
10%	**47,559,268**	1,326,268	2.9%
20%	**48,959,528**	2,726,528	5.9%
30%	**49,869,805**	3,636,805	7.9%
40%	**50,736,295**	4,503,295	9.7%
50%	**51,656,678**	5,423,678	11.7%
60%	**52,723,556**	6,490,556	14.0%
70%	**53,943,436**	7,710,436	16.7%
80%	**55,520,362**	**9,287,362**	**20.1%**
90%	**57,764,493**	11,531,493	24.9%
100%	**68,047,146**	21,814,146	47.2%



Schedule Risk Analysis

Current Schedule Start Date	**11/1/2010**
Current Schedule Completion Date	**10/27/2014**
Current Schedule Duration	**47.84 months**
Project Schedule @ 80% Confidence Level	**57.10 months**
Contingency	**9.27 months**
Contingency %	**19.4%**

Confidence Level	Simulated Schedule	Contingency (months)	Contingency %
0%	47.84	0.00	0.0%
10%	49.11	1.28	2.7%
20%	50.39	2.55	5.3%
30%	51.43	3.59	7.5%
40%	52.45	4.61	9.6%
50%	53.48	5.64	11.8%
60%	54.54	6.70	14.0%
70%	55.72	7.89	16.5%
80%	**57.10**	**9.27**	**19.4%**
90%	59.10	11.26	23.5%
100%	69.40	21.56	45.1%

Summary of Cost Risks

Cost Risk	Risk ID	EventDesc
High	CON-02	Staging Area of construction
	PM-02	Project Schedule for NED Plan
	PM-03	CM Funding - - CM Cost Will Vary Significantly from Estimate
	PR-02	Intermittent Funding

Summary of Schedule Risks

Schedule Risk	Risk ID	EventDesc
High	CON-02	Staging Area of construction
	PM-02	Project Schedule for NED Plan
	PR-02	Intermittent Funding
Low	PM-03	CM Funding - - CM Cost Will Vary Significantly from Estimate

Cost Risk Analysis

Aug 2010

Total Project Base Cost	$46,233,000

							Impact Type Cost		
Risk ID	EventDesc	Likelihood	Low % Occurrence	High % Occurrence	Cost Impact	Cost Risk	Best Case	Most Likely	Worst Case
CON-02	Staging Area of construction	Likely	50%	75%	Critical	High	$ -	$ -	$ 1,173,355
ES-01	Clamshell Dredging	Very Likely	75%	90%	Signficant	High	$ (514,046)	$ 771,069	$ 771,069
ES-02	Rock Prices	Very Likely	75%	90%	Signficant	High	$ -	$ -	$ 915,195
ES-04	Fuel Prices	Likely	50%	75%	Signficant	High	$ -	$ -	$ 250,000
ES-07	Mob, Demob & Prepwork	Very Likely	75%	90%	Critical	High	$ -	$ -	$ 1,000,000
ES-28	Estimate Productivity Factor	Likely	50%	75%	Signficant	High	$ (6,710,787)	$ -	$ -
EX-04	Market conditions and bidding competitior	Likely	50%	75%	Critical	High	$ -	$ -	$ 6,935,100
PM-02	Project Schedule for NED Plan	Very Likely	75%	90%	Signficant	High	$ -	$ -	$ 500,000
PM-03	CM Funding - - CM Cost Will Vary Significan	Certain	100%	100%	Critical	High	$ -	$ 2,031,403	$ 2,031,403
PR-02	Intermittent Funding	Likely	50%	75%	Signficant	High	$ -	$ -	$ 3,000,000

Schedule Risk Analysis

Aug 2010

Current Schedule Start Date	**11/1/2010**
Current Schedule Completion Date	**10/27/2014**
	47.84 months

							Impact Type Schedule		
Risk ID	**EventDesc**	**Likelihood**	**Low % Occurrence**	**High % Occurrence**	**Schedule Impact**	**Schedule Risk**	**Best Case**	**Most Likely**	**Worst Case**
ES-09	**Relocation of Fiber Optic Cable**	Likely	**50%**	75%	**Signficant**	**High**	0.00 months	0.00 months	6.00 months
PM-02	**Project Schedule for NED Plan**	Very Likely	**75%**	90%	**Signficant**	**High**	0.00 months	0.00 months	10.00 months
PR-02	**Intermittent Funding**	Likely	**50%**	75%	**Critical**	**High**	0.00 months	0.00 months	10.00 months

Likelihood of Occurrence Table

Any changes to these assumptions will change the assumptions in the models.

Likelihood	Low % Occurrence	High % Occurrence
Certain	100%	100%
Very Likely	75%	90%
Likely	50%	75%
Unlikely	25%	50%
Very Unlikely	10%	25%

If event occurrence is…	then it's likelihood is thought to be between…
Certain	100% and 100%
Very Likely	75% and 90%
Likely	50% and 75%
Unlikely	25% and 50%
Very Unlikely	10% and 25%

Likelihood of

If an event is classified

Certain: implies the event has a 100% to 100% chance of occurrence.
Very Likely: implies the event has a 75% to 90% chance of occurrence.
Likely: implies the event has a 50% to 75% chance of occurrence.
Unlikely: implies the event has a 25% to 50% chance of occurrence.
Very Unlikely: implies the event has a 10% to 25% chance of occurrence.

Risk Matrix

Likelihood of Occurrence	Impact or Consequence of Occurrence: Negligible	Marginal	Significant	Critical	Crisis
Very Likely	Low	Moderate	High	High	High
Likely	Low	Moderate	High	High	High
Unlikely	Low	Low	Moderate	Moderate	High
Very Unlikely	Low	Low	Low	Low	High

Crystal Ball Report - Assumptions

Simulation started on 8/30/2010 at 14:50:15
Simulation stopped on 8/30/2010 at 14:50:26

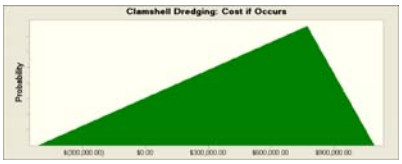
Run preferences:	
Number of trials run	30,000
Extreme speed	
Monte Carlo	
Random seed	
Precision control on	
Confidence level	99.00%
Run statistics:	
Total running time (sec)	10.68
Trials/second (average)	2,808
Random numbers per sec	109,500
Crystal Ball data:	
Assumptions	39
Correlations	0
Correlated groups	0
Decision variables	0
Forecasts	15

Assumptions

Assumption: Clamshell Dredging: Cost if Occurs

Triangular distribution with parameters:

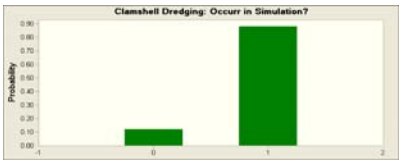
Minimum	$(514,045.92)
Likeliest	$771,068.89
80%	$771,068.89



Assumption: Clamshell Dredging: Occurr in Simulation?

Yes-No distribution with parameters:

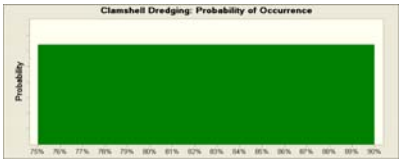
Probability of Yes(1)	88%



Assumption: Clamshell Dredging: Probability of Occurrence

Uniform distribution with parameters:

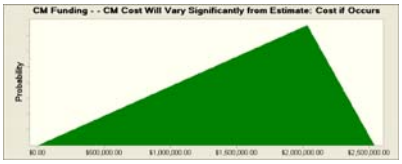
Minimum	75%
Maximum	90%



Assumption: CM Funding - - CM Cost Will Vary Significantly from Estimate: Cost if Occurs

Triangular distribution with parameters:

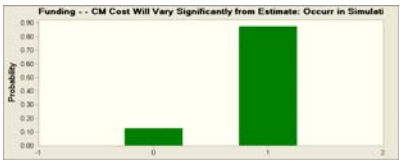
Minimum	$0.00
Likeliest	$2,031,403.30
80%	$2,031,403.30



Assumption: CM Funding - - CM Cost Will Vary Significantly from Estimate: Occurr in Simulation?

Yes-No distribution with parameters:

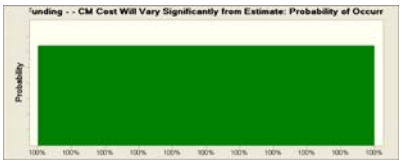
Probability of Yes(1)	87%



Assumption: CM Funding - - CM Cost Will Vary Significantly from Estimate: Probability of Occurrer

Uniform distribution with parameters:

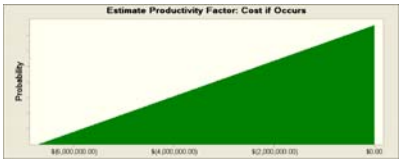
Minimum	100%
Maximum	100%



Assumption: Estimate Productivity Factor: Cost if Occurs

Triangular distribution with parameters:

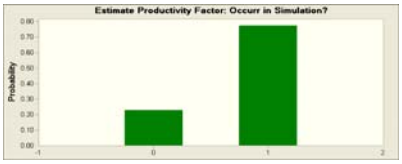
Minimum	$(6,710,786.76)
Likeliest	$0.00
Maximum	$0.00



Assumption: Estimate Productivity Factor: Occurr in Simulation?

Yes-No distribution with parameters:

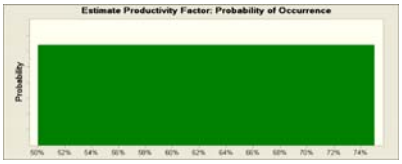
Probability of Yes(1)	77%



Assumption: Estimate Productivity Factor: Probability of Occurrence

Uniform distribution with parameters:

Minimum	50%
Maximum	75%



Assumption: Fuel Prices: Cost if Occurs

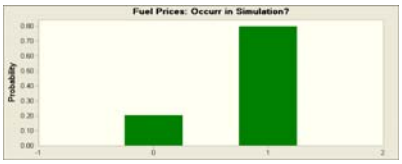
Triangular distribution with parameters:

Minimum	$0.00
Likeliest	$0.00
80%	$250,000.00

Assumption: Fuel Prices: Occurr in Simulation?

Yes-No distribution with parameters:

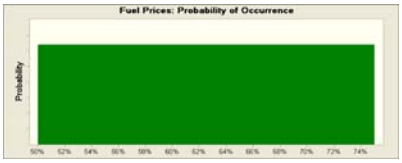
Probability of Yes(1)	80%



Assumption: Fuel Prices: Probability of Occurrence

Uniform distribution with parameters:

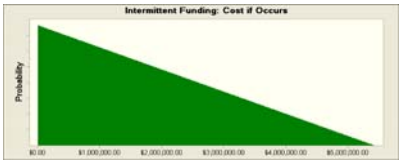
Minimum	50%
Maximum	75%



Assumption: Intermittent Funding: Cost if Occurs

Triangular distribution with parameters:

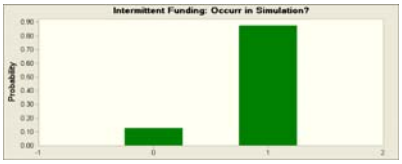
Minimum	$0.00
Likeliest	$0.00
80%	$3,000,000.00



Assumption: Intermittent Funding: Occurr in Simulation?

Yes-No distribution with parameters:

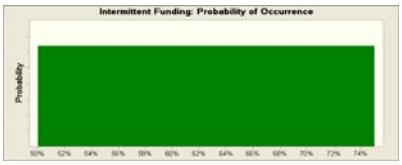
Probability of Yes(1)	87%



Assumption: Intermittent Funding: Probability of Occurrence

Uniform distribution with parameters:

Minimum	50%
Maximum	75%



Assumption: Market conditions and bidding competition: Cost if Occurs

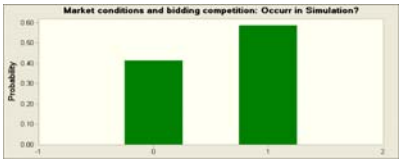
Triangular distribution with parameters:

Minimum	$0.00
Likeliest	$0.00
80%	$6,935,100.00

Assumption: Market conditions and bidding competition: Occurr in Simulation?

Yes-No distribution with parameters:

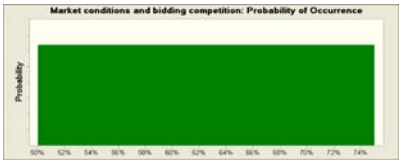
Probability of Yes(1)	59%



Assumption: Market conditions and bidding competition: Probability of Occurrence

Uniform distribution with parameters:

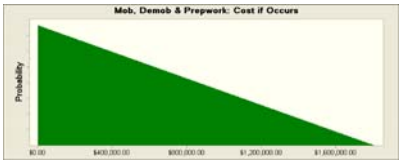
Minimum	50%
Maximum	75%



Assumption: Mob, Demob & Prepwork: Cost if Occurs

Triangular distribution with parameters:

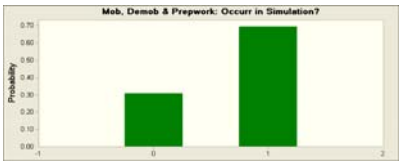
Minimum	$0.00
Likeliest	$0.00
80%	$1,000,000.00



Assumption: Mob, Demob & Prepwork: Occurr in Simulation?

Yes-No distribution with parameters:

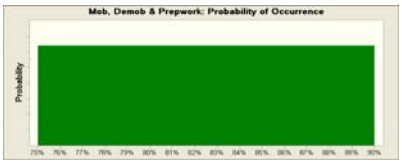
Probability of Yes(1)	69%



Assumption: Mob, Demob & Prepwork: Probability of Occurrence

Uniform distribution with parameters:

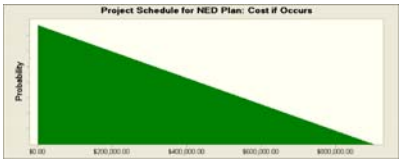
Minimum	75%
Maximum	90%



Assumption: Project Schedule for NED Plan: Cost if Occurs

Triangular distribution with parameters:

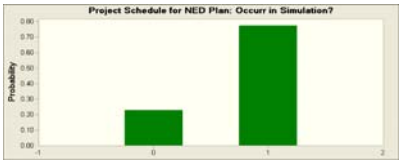
Minimum	$0.00
Likeliest	$0.00
80%	$500,000.00



Assumption: Project Schedule for NED Plan: Occurr in Simulation?

Yes-No distribution with parameters:

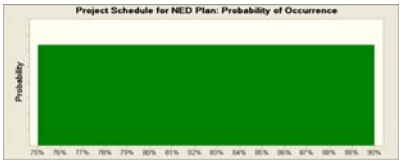
Probability of Yes(1)	77%



Assumption: Project Schedule for NED Plan: Probability of Occurrence

Uniform distribution with parameters:

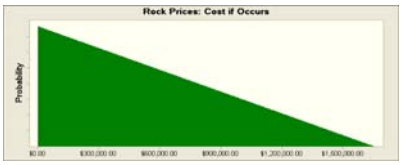
Minimum	75%
Maximum	90%



Assumption: Rock Prices: Cost if Occurs

Triangular distribution with parameters:

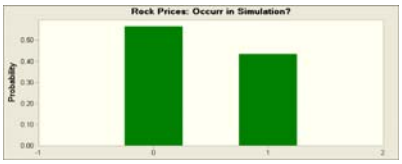
Minimum	$0.00
Likeliest	$0.00
80%	$915,195.00



Assumption: Rock Prices: Occurr in Simulation?

Yes-No distribution with parameters:

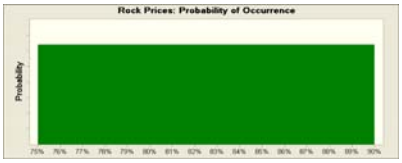
Probability of Yes(1)	43%



Assumption: Rock Prices: Probability of Occurrence

Uniform distribution with parameters:

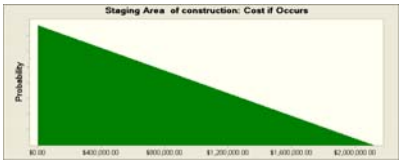
Minimum	75%
Maximum	90%



Assumption: Staging Area of construction: Cost if Occurs

Triangular distribution with parameters:

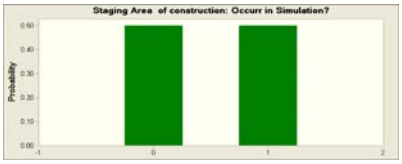
Minimum	$0.00
Likeliest	$0.00
80%	$1,173,355.43



Assumption: Staging Area of construction: Occurr in Simulation?

Yes-No distribution with parameters:

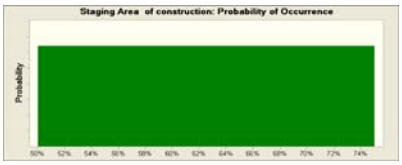
Probability of Yes(1)	50%



Assumption: Staging Area of construction: Probability of Occurrence

Uniform distribution with parameters:

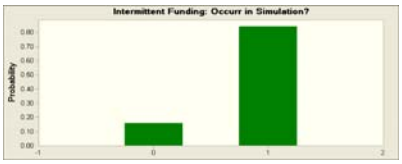
Minimum	50%
Maximum	75%



Assumption: Intermittent Funding: Occurr in Simulation?

Yes-No distribution with parameters:

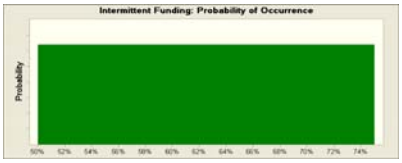
Probability of Yes(1)	84%



Assumption: Intermittent Funding: Probability of Occurrence

Uniform distribution with parameters:

Minimum	50%
Maximum	75%



Assumption: Intermittent Funding: Schedule if Occurs

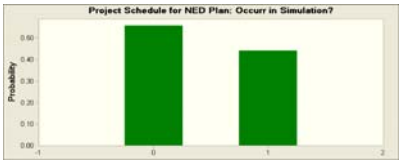
Triangular distribution with parameters:

Minimum	0.00 months
Likeliest	0.00 months
Maximum	10.00 months

Assumption: Project Schedule for NED Plan: Occurr in Simulation?

Yes-No distribution with parameters:

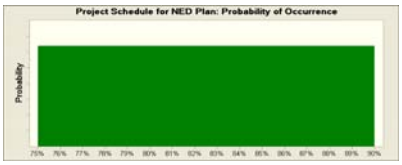
Probability of Yes(1)	44%



Assumption: Project Schedule for NED Plan: Probability of Occurrence

Uniform distribution with parameters:

Minimum	75%
Maximum	90%



Assumption: Project Schedule for NED Plan: Schedule if Occurs

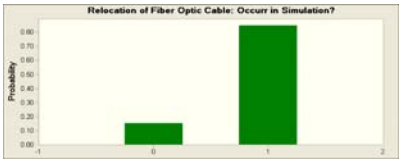
Triangular distribution with parameters:

Minimum	0.00 months
Likeliest	0.00 months
Maximum	10.00 months

Assumption: Relocation of Fiber Optic Cable: Occurr in Simulation?

Yes-No distribution with parameters:

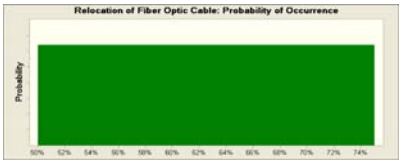
Probability of Yes(1)	85%



Assumption: Relocation of Fiber Optic Cable: Probability of Occurrence

Uniform distribution with parameters:

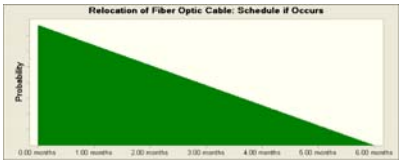
Minimum	50%
Maximum	75%



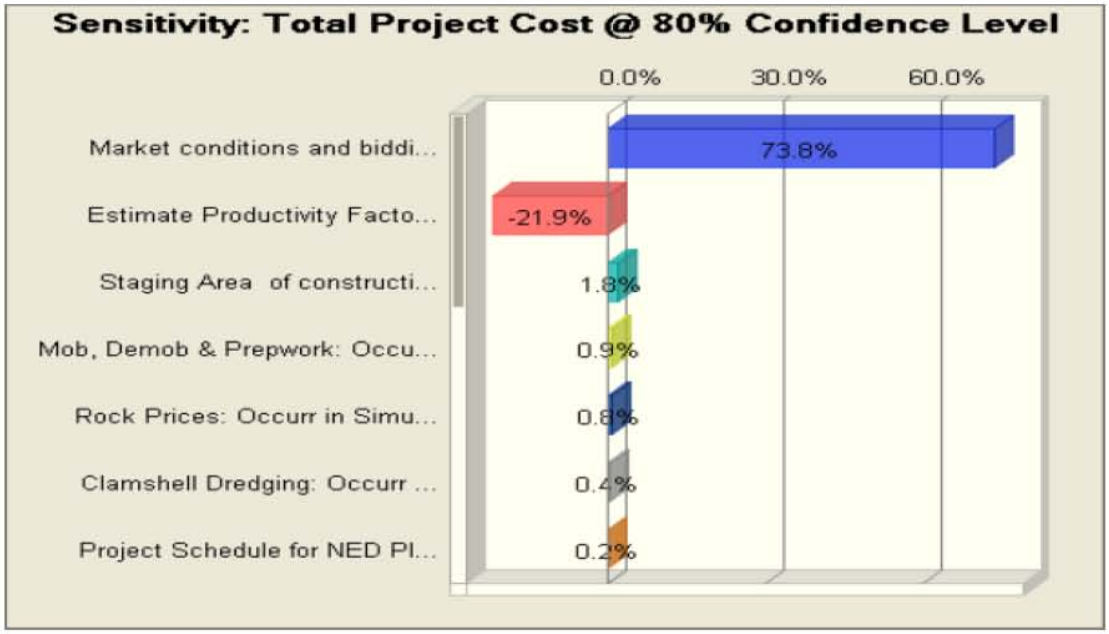
Assumption: Relocation of Fiber Optic Cable: Schedule if Occurs

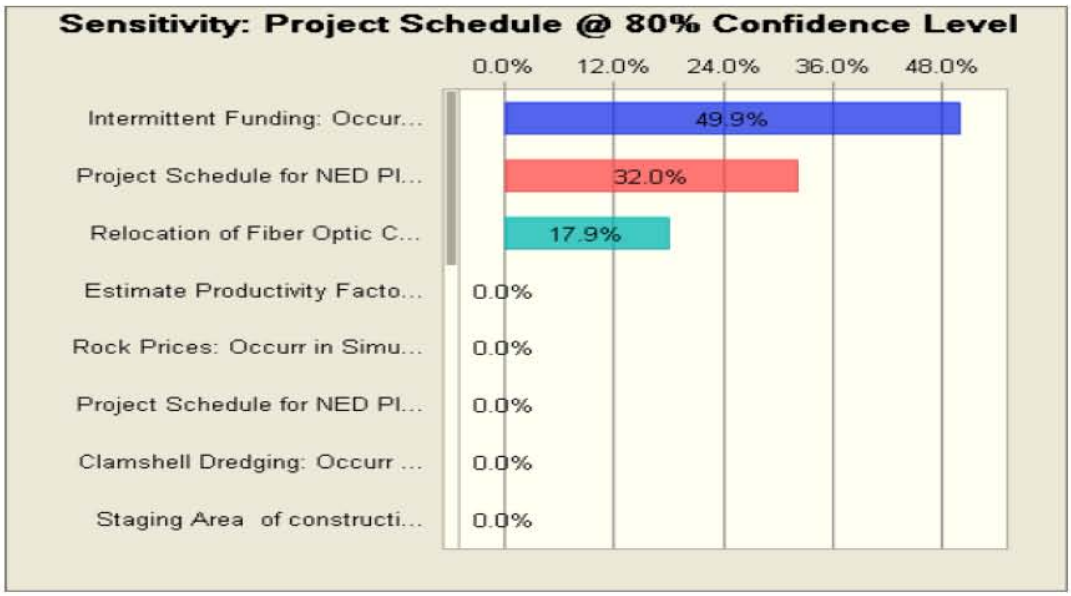
Triangular distribution with parameters:

Minimum	0.00 months
Likeliest	0.00 months
Maximum	6.00 months



End of Assumptions


Sensitivity: Total Project Cost @ 80% Confidence Level
0.0%
30.0%
60.0%
Market conditions and biddi...
73.8%
Estimate Productivity Facto...
-21.9%
Staging Area of constructi...
1.8%
Mob, Demob & Prepwork: Occu...
0.9%
Rock Prices: Occurr in Simu...
0.8%
Clamshell Dredging: Occurr ...
0.4%
Project Schedule for NED Pl...
0.2%


Sensitivity: Project Schedule @ 80% Confidence Level
0.0%
12.0%
24.0%
36.0%
48.0%
Intermittent Funding: Occur...
49.9%
Project Schedule for NED Pl...
32.0%
Relocation of Fiber Optic C...
17.9%
Estimate Productivity Facto...
0.0%
Rock Prices: Occurr in Simu...
0.0%
Project Schedule for NED Pl...
0.0%
Clamshell Dredging: Occurr ...
0.0%
Staging Area of constructi...
0.0%